

**CITY OF NEWTON**  
**PURCHASING DEPARTMENT**

***CONTRACT FOR PUBLIC WORKS***  
***(M.G.L. Ch. 30, Sec. 39m)***

***PROJECT MANUAL:***  
**SEWER MAIN SERVICES**  
***(Farina and Oakdale Roads & Francis Street)***  
***INVITATION FOR BID #10-46***

**FEBRUARY 2010**  
**Setti D. Warren, Mayor**

CITY OF NEWTON, MASSACHUSETTS

PURCHASING DEPARTMENT

[purchasing@newtonma.gov](mailto:purchasing@newtonma.gov)

Fax (617) 796-1227

February 26, 2010

**ADDENDUM #2**

INVITATION FOR BID #10-46

**Sewer Main Services- Farina & Oakdale Roads & Francis Street**

THIS ADDENDUM IS TO: Revise Item Sheet:

**Revise Item Sheet page 9 Item's 36, 37 & 38**

All other terms and conditions of this bid remain unchanged

**PLEASE ENSURE THAT YOU ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORM**

Thank you.  
Re Cappoli

*Chief Procurement Officer*

**REVISED ITEM SHEET****PAGE 9**

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
ITEM: 36 – MATERIAL(S) TESTING  THE SUM OF: AND <u>FIVE HUNDRED</u> DOLLARS <u>NO</u> CENTS  (\$ <u>500.00</u> ) PER  ALLOWANCE	1	ALL.	\$500.00
ITEM: 37 – MISCELLANEOUS WORK ALLOWANCE (ENGINEER DISCRETION FUND)  THE SUM OF: AND <u>FIVE THOUSAND</u> DOLLARS <u>NO</u> CENTS  (\$ <u>5,000.00</u> ) PER  ALLOWANCE	1	ALL.	\$ 5,000
ITEM: 38 – ALLOWANCE FOR PAYMENT OF POLICE OFFICERS  THE SUM OF: AND <u>TEN THOUSAND</u> DOLLARS <u>NO</u> CENTS  (\$ <u>10,000.00</u> ) PER  ALLOWANCE	1	ALL.	\$ 10,000

**TOTAL BID :** \$ ***THE TOTAL FOR ALL ITEMS (1-37) MUST BE PLACED IN PARAGRAPH “C” OF THE BID FORM.***

# CITY OF NEWTON, MASSACHUSETTS

## PURCHASING DEPARTMENT

[purchasing@newtonma.gov](mailto:purchasing@newtonma.gov)

Fax (617) 796-1227

**February 23, 2010**

## **ADDENDUM #1**

### INVITATION FOR BID #10-46

#### **Sewer Main Services- Farina & Oakdale Roads & Francis Street**

THIS ADDENDUM IS TO: **Change the amounts in two line items**

**Line Item 37**

**Miscellaneous Work Allowance (Engineer Discretion Fund)  
shall now read Five Thousand Dollars (\$5,000)**

**Line Item 38**

**Allowance for Payment of Police Officers  
shall now read Ten Thousand Dollars (\$10,000)**

**Please change these amounts on your BID FORM and include the new ALLOWANCES to your total.**

All other terms and conditions of this bid remain unchanged

**PLEASE ENSURE THAT YOU ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORM**

Thank you.



Re Cappoli

*Chief Procurement Officer*

**CITY OF NEWTON**  
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**SEWER MAIN SERVICES**  
*(Farina and Oakdale Roads & Francis Street)*

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**CITY OF NEWTON  
PURCHASING DEPARTMENT  
INVITATION FOR BID #10-46**

The City of Newton invites sealed bids from Contractors for

**SEWER MAIN SERVICES  
(Farina and Oakdale Roads & Francis Street)**

**Pre Bid Conference at:: 10:00 a.m., February 17, 2010, City Hall, Room 204**

**Bids will be received until: 10:00 a.m., March 1, 2010**

at the Purchasing Department, Room 204, Newton City Hall, 1000 Commonwealth Ave., Newton, MA 02459. Immediately following the deadline for bids all bids received within the time specified will be publicly opened and read aloud.

This project consist of work in three (3) project zones. Zone 1 (Francis Street) is a sewer main extension of approximately 130 linear feet and (2) house service connections. Zones 2 and 3 are sewer main spot repairs and house service upgrades at Farina Road and Oakdale Road respectively. Work at Farina Road includes approximately 40 linear feet of sewer main spot repair at a depth of approximately 13 feet with no house service connections. Work at Oakdale Road includes approximately 275 linear feet of sewer main repairs at an approximate depth of 5' - 6' and (9) house service connections. Farina and Oakdale Road(s) include by-pass pumping of the existing sewage flow under the scope of work.

Contract Documents will be available online at the City's website: [www.ci.newton.ma.us/bids](http://www.ci.newton.ma.us/bids), or for pickup at the Purchasing Department or **after: 10:00 a.m., February 11, 2010.** There will be no charge for contract documents.

All bids must be accompanied by a bid deposit in an amount that is not less than five percent (5%) of the value of the bid, including all add alternates. **All Bids must be submitted with one Original and one Copy.**

All bids are subject to the provisions of M.G.L. Chapter 30, Section 39M. **Wages are subject** to minimum wage rates determined by the Massachusetts Department of Labor and Industries pursuant to M.G.L. Chapter 149, Sec. 26 to 27H. The schedule of wage rates applicable to this contract is included in the bidding documents. In addition, the prevailing wage schedule will be updated annually for all public construction projects lasting longer than one (1) year. You will be required to pay the rates set out in any updated prevailing wage schedule. Increases in prevailing wage schedules will not be the basis for change order requests. The successful bidder will be required to provide a Certificate of Insurance demonstrating current coverage of the type and amounts set forth in the Project Manual. The successful bidder will be required to furnish a **Labor and Materials Payment Bond in the amount of 50%** of the contract total.

Time is of the essence in the performance of work for this contract. Time for completion of this project is **60 calendar days** from day of **full contract execution. Anticipated start date is June 1, 2010.** Bidders attention is directed to the requirements of the City of Newton Supplemental Equal Employment Opportunity, Anti-Discrimination and Affirmative Action Program and also to the Minority/Women Business Enterprise Plan, December 1999, which is hereby incorporated into the Contract Documents.

If you download bids from the internet site and would like to make it known that your company has done so, you may fax the Purchasing Dept. (617) 796-1227 with your NAME, ADDRESS, PHONE, FAX AND INVITATION FOR BID NUMBER. **Drawings must be picked up at, or mailed from the Purchasing Dept.**

The City of Newton's Purchasing Dept. converted to an email notification system of all upcoming public bids effective July 1, 2009. If you wish to receive notification of bids, please email us your company information to [purchasing@newtonma.gov](mailto:purchasing@newtonma.gov), otherwise you may view all City of Newton public bids online at [www.ci.newton.ma.us/bids](http://www.ci.newton.ma.us/bids).

The City of Newton will reject any and all bids when required to do so by the above referenced General Laws. In addition, the City of Newton reserves the right to waive any informalities in any or all bids, or to reject any or all bids, in whole or in part, if it be in the public interest to do so.

CITY OF NEWTON

Re Cappoli  
Chief Procurement Officer

February 11, 2010

**CITY OF NEWTON**  
**DEPARTMENT OF PURCHASING**  
**INSTRUCTIONS TO BIDDERS**

**ARTICLE 1 - BIDDER'S REPRESENTATION**

- 1.1 Each General Bidder (hereinafter called the "Bidder") by making a bid (hereinafter called "bid") represents that:
1. The Bidder has read and understands the Contract Documents and the bid is made in accordance therewith.
  2. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.2 Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the bid as submitted.

**ARTICLE 2 - REQUEST FOR INTERPRETATION**

- 2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the *Chief Procurement Officer*, at [purchasing@newtonma.gov](mailto:purchasing@newtonma.gov) or via facsimile (617) 796-1227. The City will answer such requests if received seven (7) calendar days before the date for receipt of the bids.
- 2.3 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents. The City will not be held accountable for any oral instruction.
- 2.4 Addenda will be faxed or emailed to every individual or firm on record as having taken a set of Contract Documents.
- 2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids where Contract Documents are on file, in addition to being available online at [www.ci.newton.ma.us/bids](http://www.ci.newton.ma.us/bids).
- 2.6 Bidders downloading information off the internet web site are solely responsible for obtaining any addenda prior to the bid opening. If the bidder makes themselves known to the Purchasing Dept., at [purchasing@newtonma.gov](mailto:purchasing@newtonma.gov) or via facsimile (617) 796-1227, they shall be placed on the bidder's list. Bidders must provide the Purchasing Dept. with their company's name, street address, city, state, zip, phone, fax, email address and **INVITATION FOR BID NUMBER #10-46**.

**ARTICLE 3 - MBE PARTICIPATION**

- 3.1 By bidding on this project each Bidder certifies its intent to comply with the City of Newton Minority/Women Business Enterprise Plan dated December 1999 to further expand business opportunities for minority firms. A copy of this plan is incorporated in the Project Manual.
- 3.2 Bidders are advised that the City of Newton Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program is applicable to all construction contracts in excess of \$50,000.00. A copy of this program is incorporated in the Project Manual. A Contractor's Certification form must be signed by all successful low bidders prior as a condition of contract award. No contract shall be executed or valid unless the contractor has executed and submitted the Contractor's Certification. (see Attachment B to the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program.)
- 3.3 The awarded bidder shall, prior to the award of any sub-contract, obtain from each of its sub-contractors the Sub-Contractors Certification certifying the Sub-Contractor shall comply with the minority manpower ratio and specific affirmative action steps described in the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program contained in the Project Manual. (see Attachment C to the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program.)

#### ARTICLE 4 - PREPARATION AND SUBMISSION OF BIDS

- 4.1 Bids shall be submitted on the "Bid Form" as appropriate, furnished by the City.
- 4.2 All entries on the Bid Form shall be made by typewriter or in ink.
- 4.3 Any quantities indicated on the Bid Form or elsewhere in the Project Manual or Drawings are estimates only and are given solely as a basis for the comparison of bids. The City does not by implication or otherwise guarantee them to be even approximately correct. The Contractor shall have no claim for additional compensation, or refuse to do the work called for, by reason of the actual quantities involved being greater or lesser by any amount than those called for in the proposal.
- 4.4 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.
- 4.5 All proposals which contain abnormally high prices, or abnormally low prices, for any class of work, or those which contain unbalanced bidding in any form or manner may be rejected as informal.
- 4.6 Bid Deposits shall be submitted in the amount specified in the Invitation for Bids. They shall be made payable to the City of Newton and shall be either in the form of cash, certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or a bid bond issued by a surety licensed to do business in the Commonwealth of Massachusetts; and shall be conditioned upon the faithful performance by the principal of the agreements contained in the bid.
- Bid deposits of the three (3) lowest responsible and eligible Bidders shall be retained until the execution and delivery of the Owner/Contractor agreement.
- 4.7 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside:
- \* GENERAL BID FOR:
  - \* NAME OF PROJECT AND INVITATION NUMBER
  - \* BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER
- 4.8 Date and time for receipt of bids is set forth in the Invitation for Bids.
- 4.9 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.

#### ARTICLE 5 - ALTERNATES

- 5.1 Each Bidder shall acknowledge Alternates (if any) in Section C on the Bid Form.
- 5.2 In the event an Alternate does not involve a change in the amount of the base bid, the Bidder shall so indicated by writing "No Change", or "N/C" or "0" in the space provided for that Alternate.
- 5.3 Bidders shall enter on the Bid Form a single amount for each Alternate which shall consist of the amount for work performed by the Contractor.
- 5.4 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

#### ARTICLE 6 - WITHDRAWAL OF BIDS

- 6.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or telegraphic request. Telegraphic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.
- 6.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.



- 6.3 No bids shall be withdrawn for sixty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

#### ARTICLE 7 - CONTRACT AWARD

- 7.1 The City of Newton will award the contract to the lowest eligible and responsible Bidder within sixty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.
- 7.2 The City of Newton reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.
- 7.3 As used herein, the term "lowest responsible and eligible Bidder" shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder.
- 7.4 It is the purpose of the City not to award this contract to any bidder who does not furnish evidence satisfactory to the Chief Procurement Officer that he has the ability and experience in this class of work and that he has sufficient capital and plant to enable him to prosecute the same successfully and to complete it within the specified time and that he will complete it in accordance with the terms thereof.
- 7.5 Subsequent to the award and within five (5) days, Saturday, Sundays and legal holidays excluded, after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the City a Contract in the form included in the Contract Documents in such number of counterparts as the City may require.
- 7.6 In the event that the City receives low bids in identical amount from two or more responsive and responsible Bidders, the City shall select the successful Bidder by a blind selection process such as flipping a coin or drawing names from a hat. The low Bidders who are under consideration will be invited to attend and observe the selection process.

#### ARTICLE 8 - TAXES

- 8.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this Commonwealth, such as any and all building materials, supplies, services and equipment required to complete the work.
- 8.2 The City is exempt from payment of the Massachusetts Sales Tax, and the Bidder shall not include any sales tax on its bid. The City's exemption Number is E-046-001-404.

#### END OF SECTION

**CITY OF NEWTON**  
**DEPARTMENT OF PURCHASING**  
**BID FORM #10-46**

- A. The undersigned proposes to furnish all labor and materials required in accordance with the Contract Documents supplied by the City of Newton entitled:

**SEWER MAIN SERVICES**  
*(Farina and Oakdale Roads & Francis Street)*

for the contract price specified below, subject to additions and deduction according to the terms of the specifications.

- B. This bid includes addenda number(s) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

- C. The proposed contract price is:

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_).

*(The figure inserted above shall be the Total Bid Price as computed on the Item Sheets attached hereto.)*

COMPANY: \_\_\_\_\_

- D. The undersigned has completed and submits herewith the following documents:

- ☐ **Bid Item Sheets, 9 pages**
- ☐ Bidder's Qualification Form and References, 2 pages
- ☐ A five percent (5%) bid deposit/bid guarantee.

- E. The undersigned agrees that, if s/he is selected as general contractor, s/he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price.

The undersigned hereby certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A of M.G.L. Chapter 30, s 39M.

The undersigned certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration ("OSHA") that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States OSHA that is at least 10 hours in duration. The undersigned understands that any employee found on a worksite subject to this section without documentation

of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date \_\_\_\_\_

\_\_\_\_\_  
(Name of General Bidder)

BY: \_\_\_\_\_

\_\_\_\_\_  
(Printed Name and Title of Signatory)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(City, State Zip)

\_\_\_\_\_  
(Telephone)

/ \_\_\_\_\_  
(FAX)

\_\_\_\_\_  
(E-mail address)

**NOTE:** If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; if an individual, give residential address if different from business address; and, if operating as a d/b/a give full legal identity. Attach additional pages as necessary.

**END OF SECTION**

The Contractor shall insert prices for each item in ink, in both words and figures, and is to show a total bid price. In the event a discrepancy between the written words and figures, the written words shall govern. In the event an error in the bidders total bid price, the corrected total bid obtained by the summation of the products of the unit prices multiplied by the respective quantities shall stand as the bidder's total bid price.

The Contractor is advised to review any related plans, conduct a full site review, and read all the provisions in the document before inserting prices, and is further

The Contractor is advised to make his own determination as to the accuracy of the estimated quantities before inserting bid prices.

## ESTIMATED

## ITEM DESCRIPTION &amp; BID PRICE

## QUANTITIES

## UNIT

## TOTAL COST

**ITEM: 1 - MOBILIZATION ( INCLUDING SURVEY SERVICES, PRE-CONSTRUCTION DOCUMENTATION, PRIVATE LAND OWNER NEGOTIATIONS, TRENCH PERMIT ADMINISTRATION & UTILITY COMPANY COORDINATION )**

THE SUM OF:

\_\_\_\_\_ DOLLARS  
AND \_\_\_\_\_ CENTS

(\$ \_\_\_\_\_) PER **LUMP SUM**

**1**

**LS.**

\$ \_\_\_\_\_

**ITEM: 2 – FURNISH & MOUNT SAFETY SIGNS (INCLUDING POSTS)**

THE SUM OF:

\_\_\_\_\_ DOLLARS  
AND \_\_\_\_\_ CENTS

(\$ \_\_\_\_\_) PER **SQUARE FEET**

**60**

**S.F.**

\$ \_\_\_\_\_

**ITEM: 3 – SAFETY CONTROLS & DEVICES FOR CONSTRUCTION OPERATIONS**

THE SUM OF:

\_\_\_\_\_ DOLLARS  
AND \_\_\_\_\_ CENTS

(\$ \_\_\_\_\_) PER **LUMP SUM**

**1**

**L.S.**

\$ \_\_\_\_\_

**ITEM: 4 – MANUFACTURED CATCHBASIN SEDIMENTATION PROTECTION**

THE SUM OF:

\_\_\_\_\_ DOLLARS  
AND \_\_\_\_\_ CENTS

(\$ \_\_\_\_\_) PER **EACH**

**16**

**EA.**

\$ \_\_\_\_\_

**ITEM SHEETS****PAGE 2**

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<p>ITEM: 5a – <b>CRITICALLY SILENCED SEWER BY-PASS SYSTEM (INCLUSIVE OF PUMP, CRITICALLY SILENCED ENCLOSURE, PIPES, FITTINGS AND RAMPS) @ OAKDALE ROAD</b></p> <p>THE SUM OF: _____ DOLLARS AND _____ CENTS (\$ _____) PER <b>LUMP SUM</b></p>	<b>1</b>	<b>L.S.</b>	\$ _____
<p>ITEM: 5b – <b>CRITICALLY SILENCED SEWER BY-PASS SYSTEM (INCLUSIVE OF PUMP, CRITICALLY SILENCED ENCLOSURE, PIPES, FITTINGS AND RAMPS) @ FARINA ROAD</b></p> <p>THE SUM OF: _____ DOLLARS AND _____ CENTS (\$ _____) PER <b>LUMP SUM</b></p>	<b>1</b>	<b>L.S.</b>	\$ _____
<p>ITEM: 6 – <b>SAWCUT BITUMINOUS CONCRETE ROADWAY</b></p> <p>THE SUM OF: _____ DOLLARS AND _____ CENTS (\$ _____) PER <b>LUMP SUM</b></p>	<b>1</b>	<b>L.S.</b>	\$ _____
<p>ITEM: 7 – <b>GENERAL EXCAVATION &amp; DISPOSAL OF EXCAVATED MATERIALS (INCLUSIVE OF EXISTING SEWER PIPES)</b></p> <p>THE SUM OF: _____ DOLLARS AND _____ CENTS (\$ _____) PER <b>LUMP SUM</b></p>	<b>1</b>	<b>L.S.</b>	\$ _____
<p>ITEM: 8 – <b>EXPLORATORY EXCAVATION(S)</b></p> <p>THE SUM OF: _____ DOLLARS AND _____ CENTS (\$ _____) PER <b>CUBIC YARD</b></p>	<b>15</b>	<b>C.Y.</b>	\$ _____

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<b>ITEM: 9 – EXTRA DEPTH EXCAVATION IN TRENCHES</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>CUBIC YARD</b>	<b>50</b>	<b>C.Y.</b>	\$ _____
<b>ITEM: 10 – ROCK EXCAVATION IN TRENCHES</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>CUBIC YARD</b>	<b>25</b>	<b>C.Y.</b>	\$ _____
<b>ITEM: 11 – GRAVEL FURNISHED FROM OUTSIDE THE SITE ( FOR TRENCH REFILL )</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>TON</b>	<b>15</b>	<b>TON</b>	\$ _____
<b>ITEM: 12 – GRAVEL FURNISHED FROM OUTSIDE THE SITE ( FOR ROADWAY FILL )</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>TON</b>	<b>15</b>	<b>TON</b>	\$ _____
<b>ITEM: 13 – FURNISH &amp; PLACE DENSE GRADED CRUSHED STONE</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>TON</b>	<b>25</b>	<b>TON</b>	\$ _____

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<b>ITEM: 14 – FURNISH &amp; PLACE ¾” CRUSHED STONE (MAX STONE SIZE ¾”)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>TON</b>	<b>25</b>	<b>TON</b>	\$ _____
<b>ITEM: 15 – CLASS B CEMENT CONCRETE FOR ENCASEMENT</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>CUBIC YARD</b>	<b>10</b>	<b>C.Y.</b>	\$ _____
<b>ITEM: 16 – DUST CONTROL (CHEMICAL TREATMENT)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>POUND</b>	<b>400</b>	<b>LBS</b>	\$ _____
<b>ITEM: 17 – FURNISH AND INSTALL WOVEN POLYPROPYLENE GEOTEXTILE FABRIC</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>SQUARE YARD</b>	<b>335</b>	<b>S.Y.</b>	\$ _____
<b>ITEM: 18a – FURNISH AND INSTALL 8” SDR-35 PVC SEWER PIPE (AT FRANCIS STREET)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>LINEAR FOOT</b>	<b>130</b>	<b>L.F.</b>	\$ _____

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<b>ITEM: 18b – FURNISH AND INSTALL 10” SDR-35 PVC SEWER PIPE (AT FARINA ROAD)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>LINEAR FOOT</b>	<b>50</b>	<b>L.F.</b>	\$ _____
<b>ITEM: 18c – FURNISH AND INSTALL 10” SDR-35 PVC SEWER PIPE (AT OAKDALE ROAD)</b> THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>LINEAR FOOT</b>	<b>280</b>	<b>L.F.</b>	\$ _____
<b>ITEM: 19 – FURNISH AND INSTALL 6” SDR-35 PVC SEWER PIPE (HOUSE CONNECTIONS)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>LINEAR FEET</b>	<b>250</b>	<b>L.F.</b>	\$ _____
<b>ITEM: 20a – FURNISH &amp; INSTALL 8” x 6” SDR-35 PVC TEE WYE FOR SERVICE CONNECTION</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>3</b>	<b>EA.</b>	\$ _____
<b>ITEM: 20b – FURNISH &amp; INSTALL 10” x 6” SDR-35 PVC TEE WYE FOR SERVICE CONNECTION</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>10</b>	<b>EA.</b>	\$ _____



**ITEM SHEETS****PAGE 6**

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<b>ITEM: 21 – FURNISH &amp; INSTALL 6” x 6” 45° SDR-35 PVC BEND FOR SERVICE CONNECTION</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>15</b>	<b>EA.</b>	\$ _____
<b>ITEM: 22 – FURNISH &amp; INSTALL 6” x 6” 90° SDR-35 PVC SWEEP FOR SERVICE CONNECTION</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>15</b>	<b>EA.</b>	\$ _____
<b>ITEM: 23 – FURNISH &amp; INSTALL 6” AIRTIGHT SDR-35 PVC PLUG FOR SERVICE CONNECTION</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>15</b>	<b>EA.</b>	\$ _____
<b>ITEM: 24 – CORE A HOLE IN AN EXISTING MANHOLE</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>4</b>	<b>EA.</b>	\$ _____
<b>ITEM: 25 – FURNISH AND INSTALL PRECAST CEMENT CONCRETE SEWER MANHOLE (EXCLUDING COST OF CASTING)</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>VERTICAL FEET</b>	<b>22</b>	<b>V.F.</b>	\$ _____

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
<b>ITEM: 26 – FURNISH AND INSTALL COVER &amp; FRAME FOR MANHOLE</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>EACH</b>	<b>4</b>	<b>EA.</b>	\$ _____
<b>ITEM: 27 – SHEATHING LUMBER LEFT IN PLACE</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>THOUSAND BOARD FEET</b>	<b>5</b>	<b>T.B.F.</b>	\$ _____
<b>ITEM: 28 – PRESSURE &amp; VACUUM TESTING OF SEWER SYSTEM COMPONENTS</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>LUMP SUM</b>	<b>1</b>	<b>L.S.</b>	\$ _____
<b>ITEM: 29 – 2” TEMPORARY BITUMINOUS CONCRETE FOR TRENCH RESURFACING</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>SQUARE YARD</b>	<b>275</b>	<b>S.Y.</b>	\$ _____
<b>ITEM: 30 – 4” BITUMINOUS CONCRETE FOR INITIAL ‘PERMANENT’ TRENCH RESURFACING</b>  THE SUM OF: _____ DOLLARS AND _____ CENTS  (\$ _____) PER <b>SQUARE YARD</b>	<b>275</b>	<b>S.Y.</b>	\$ _____

ITEM DESCRIPTION & BID PRICE	QUANTITIES	UNIT	TOTAL COST
<p>ITEM: 31 – REMOVE, STOCKPILE AND RESET EXISTING CURB</p> <p>THE SUM OF: _____ DOLLARS</p> <p>AND _____ CENTS</p> <p>(\$ _____) PER <b>LINEAR FEET</b></p>	<b>100</b>	<b>L.F.</b>	\$ _____
<p>ITEM: 32 – 3” BITUMINOUS CONCRETE WALKS &amp; DRIVE APRONS</p> <p>THE SUM OF: _____ DOLLARS</p> <p>AND _____ CENTS</p> <p>(\$ _____) PER <b>SQUARE YARD</b></p>	<b>20</b>	<b>S.Y.</b>	\$ _____
<p>ITEM: 33 – 4” CEMENT CONCRETE WALKS WITH LAMPBLACK</p> <p>THE SUM OF: _____ DOLLARS</p> <p>AND _____ CENTS</p> <p>(\$ _____) PER <b>SQUARE YARD</b></p>	<b>30</b>	<b>S.Y.</b>	\$ _____
<p>ITEM: 34 – 6” CEMENT CONCRETE DRIVE APRONS WITH LAMPBLACK</p> <p>THE SUM OF: _____ DOLLARS</p> <p>AND _____ CENTS</p> <p>(\$ _____) PER <b>SQUARE YARD</b></p>	<b>20</b>	<b>S.Y.</b>	\$ _____
<p>ITEM: 35 – REGRADE, LOAM &amp; SEED (LOAM BORDERS &amp; PRIVATE YARDS)</p> <p>THE SUM OF: _____ DOLLARS</p> <p>AND _____ CENTS</p> <p>(\$ _____) PER <b>SQUARE YARD</b></p>	<b>30</b>	<b>S.Y.</b>	\$ _____

**ITEM SHEETS****PAGE 9**

ITEM DESCRIPTION & BID PRICE	ESTIMATED QUANTITIES	UNIT	TOTAL COST
ITEM: 36 – MATERIAL(S) TESTING  THE SUM OF:  AND <u>FIVE HUNDRED</u> DOLLARS <u>NO</u> CENTS  (\$ <u>500.00</u> ) PER  ALLOWANCE        \$500        ALL.        \$ _____			
ITEM: 37 – MISCELLANEOUS WORK ALLOWANCE (ENGINEER DISCRETION FUND)  THE SUM OF:  AND <u>THREE THOUSAND</u> DOLLARS <u>NO</u> CENTS  (\$ <u>5,000.00</u> ) PER  ALLOWANCE        \$ 5,000        ALL.        \$ _____			
ITEM: 38 – ALLOWANCE FOR PAYMENT OF POLICE OFFICERS  THE SUM OF:  AND <u>THREE THOUSAND</u> DOLLARS <u>NO</u> CENTS  (\$ <u>10,000.00</u> ) PER  ALLOWANCE        \$ 10,000        ALL.        \$ _____			

**TOTAL BID :    \$** ***THE TOTAL FOR ALL ITEMS (1-37) MUST BE PLACED IN PARAGRAPH "C" OF THE BID FORM.*****END OF SECTION**

## CITY OF NEWTON

### BIDDER'S QUALIFICATIONS AND REFERENCES FORM

All questions must be answered, and the data given must be clear and comprehensive. Please type or print legibly. If necessary, add additional sheet for starred items. This information will be utilized by the City of Newton for purposes of determining bidder responsiveness and responsibility with regard to the requirements and specifications of the Contract.

1. FIRM NAME: \_\_\_\_\_
2. WHEN ORGANIZED: \_\_\_\_\_
3. INCORPORATED? \_\_\_\_ YES \_\_\_\_ NO DATE AND STATE OF INCORPORATION: \_\_\_\_\_
- \* 4. LIST ALL CONTRACTS CURRENTLY ON HAND, SHOWING CONTRACT AMOUNT AND ANTICIPATED DATE OF COMPLETION:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \* 5. HAVE YOU EVER FAILED TO COMPLETE A CONTRACT AWARDED TO YOU?  
\_\_\_\_ YES \_\_\_\_ NO  
IF YES, WHERE AND WHY?  
\_\_\_\_\_  
\_\_\_\_\_
- \* 6. HAVE YOU EVER DEFAULTED ON A CONTRACT? \_\_\_\_ YES \_\_\_\_ NO  
IF YES, PROVIDE DETAILS.  
\_\_\_\_\_  
\_\_\_\_\_
- \* 7. LIST YOUR VEHICLES/EQUIPMENT AVAILABLE FOR THIS CONTRACT:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- \* 8. IN THE SPACES FOLLOWING, PROVIDE INFORMATION REGARDING CONTRACTS COMPLETED BY YOUR FIRM SIMILAR IN NATURE TO THE PROJECT BEING BID. A MINIMUM OF FOUR (4) CONTRACTS SHALL BE LISTED. PUBLICLY BID CONTRACTS ARE PREFERRED, BUT NOT MANDATORY.  
  
PROJECT NAME: \_\_\_\_\_  
OWNER: \_\_\_\_\_  
CITY/STATE: \_\_\_\_\_  
DOLLAR AMOUNT: \$ \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_  
PUBLICLY BID? \_\_\_\_ YES \_\_\_\_ NO  
TYPE OF WORK?: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_ TELEPHONE #: (\_\_\_\_)\_\_\_\_\_  
CONTACT PERSON'S RELATION TO PROJECT?: \_\_\_\_\_  
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: \_\_\_\_\_  
OWNER: \_\_\_\_\_  
CITY/STATE: \_\_\_\_\_  
DOLLAR AMOUNT: \$ \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_  
PUBLICLY BID? \_\_\_\_\_ YES \_\_\_\_\_ NO  
TYPE OF WORK?: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_ TELEPHONE #: (\_\_\_\_)\_\_\_\_\_  
CONTACT PERSON'S RELATION TO PROJECT?: \_\_\_\_\_  
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: \_\_\_\_\_  
OWNER: \_\_\_\_\_  
CITY/STATE: \_\_\_\_\_  
DOLLAR AMOUNT: \$ \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_  
PUBLICLY BID? \_\_\_\_\_ YES \_\_\_\_\_ NO  
TYPE OF WORK?: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_ TELEPHONE #: (\_\_\_\_)\_\_\_\_\_  
CONTACT PERSON'S RELATION TO PROJECT?: \_\_\_\_\_  
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: \_\_\_\_\_  
OWNER: \_\_\_\_\_  
CITY/STATE: \_\_\_\_\_  
DOLLAR AMOUNT: \$ \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_  
PUBLICLY BID? \_\_\_\_\_ YES \_\_\_\_\_ NO  
TYPE OF WORK?: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_ TELEPHONE #: (\_\_\_\_)\_\_\_\_\_  
CONTACT PERSON'S RELATION TO PROJECT?: \_\_\_\_\_  
(i.e., contract manager, purchasing agent, etc.)

9. The undersigned certifies that the information contained herein is complete and accurate and hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Newton in verification of the recitals comprising this statement of Bidder's qualifications and experience.

DATE: \_\_\_\_\_ BIDDER: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

**END OF SECTION**

## **CONTRACT FORMS**

The awarded bidder will be required to complete and submit the following documents in order to execute a contract pursuant to this bid.

**The forms are provided for informational purposes only.**

**None of the following forms are required at the time of bid submittal.**

# CITY-CONTRACTOR AGREEMENT

## CONTRACT NO. C-

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_ in the year Two Thousand and Ten by and between the CITY OF NEWTON, a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, hereinafter referred to as the CITY, acting through its Chief Procurement Officer, but without personal liability to him, and hereinafter referred to as the CONTRACTOR.

The parties hereto for the consideration hereinafter set forth agree as follows:

**ARTICLE 1. STATEMENT OF WORK.** The Contractor shall furnish all labor, materials, and equipment and perform all work required in strict accordance with the Contract Documents for the following project:

**SEWER MAIN SERVICES**  
*(Farina and Oakdale Roads & Francis Street)*

**ARTICLE 2. TIME OF COMPLETION.** The Contractor shall commence work under this Contract on the date specified in the written notice of the City to proceed and shall fully complete all work hereunder **within sixty (60) calendar days**, the time specified in the Summary of Work and Specific Work Requirements of the Project Manual. Time is of the essence with regard to this contract. Failure to complete within the time specified shall be subject to the assessment of liquidated damages in accordance with the provisions contained in the Project Manual.

**ARTICLE 3. THE CONTRACT PRICE.** The City shall pay the Contractor for the full and satisfactory performance of the Contract, in current funds a sum not to exceed:

**ARTICLE 4. CONTRACT DOCUMENTS.** The Contract Documents consist of the following documents which are either attached to this Agreement or are incorporated herein by reference:

- a. This CITY-CONTRACTOR Agreement;
- b. The City's Invitation For Bid # 10-46 issued by the Purchasing Department;
- c. The Project Manual for **Sewer Main Extension (Farina & Oakdale Rd. & Francis St.)** including the Instructions to Bidders; General Conditions; Special Conditions; MWBE/AA Requirements, Wage Rate Requirements and Wage Rate Schedule(s) including any updated prevailing wage rate schedules if applicable; The Supplementary Special Conditions; General Requirements and Project Specifications; and Drawings, if included or referenced therein;
- d. Addenda Number(s) \_\_\_\_\_;
- e. The Bid Response of the CONTRACTOR submitted for this Project and accompanying documents and certifications;
- f. Certificate(s) of Insurance and surety bond(s) submitted by the CONTRACTOR in connection with this Project;
- g. Duly authorized and executed Amendments, Change Orders or Shipping Orders issued by the CITY after execution of this CITY-CONTRACTOR Agreement.



This CITY-CONTRACTOR Agreement, together with the other documents enumerated in this Article, constitute the entire Agreement between the CITY and the CONTRACTOR.

**ARTICLE 5. ALTERNATES.** The following Alternates have been accepted and their costs are included in the Contract Price stated in Article 3 of this Agreement:

Alternates: N/A

**ARTICLE 6. APPLICABLE STATUTES.** All applicable federal, state and local laws and regulations are incorporated herein by reference and the Contractor agrees to comply with same.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed under seal the day and year first above written.

**CONTRACTOR**

By \_\_\_\_\_  
Title \_\_\_\_\_

Date \_\_\_\_\_

*Affix Corporate Seal Here*

Certified that additional funds are  
in the following accounts:

37A401E1A-586010 - \$  
37A401E1A-586010 - \$  
37A401E3A-586010 - \$

I further certify that the Mayor is  
authorized to execute contracts and  
approve change orders.

By \_\_\_\_\_  
*Comptroller of Accounts*

Date \_\_\_\_\_

**CITY OF NEWTON**

By \_\_\_\_\_  
*Chief Procurement Officer*

Date \_\_\_\_\_

By \_\_\_\_\_  
*Commissioner of Public Works*

Date \_\_\_\_\_

Approved as to Legal Form and  
Character

By \_\_\_\_\_  
*Associate City Solicitor*

Date \_\_\_\_\_

**CONTRACT AND BONDS**

By \_\_\_\_\_  
*Setti D. Warren, Mayor*

Date \_\_\_\_\_

## CERTIFICATE OF AUTHORITY - CORPORATE

1. I hereby certify that I am the Clerk/Secretary of \_\_\_\_\_  
(insert full name of Corporation)
2. corporation, and that \_\_\_\_\_  
(insert the name of officer who signed the **contract and bonds.**)
3. is the duly elected \_\_\_\_\_  
(insert the title of the officer in line 2)
4. of said corporation, and that on \_\_\_\_\_  
(insert a date that is ***ON OR BEFORE*** the date the officer signed the **contract and bonds.**)

at a duly authorized meeting of the Board of Directors of said corporation, at which all the directors were present or waived notice, it was voted that

5. \_\_\_\_\_ the \_\_\_\_\_  
(insert **name** from line 2) (insert **title** from line 3)

of this corporation be and hereby is authorized to execute contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

6. ATTEST: \_\_\_\_\_ *AFFIX CORPORATE  
SEAL HERE*  
(Signature of **Clerk or Secretary**)\*
7. Name: \_\_\_\_\_  
(Please print or type name in line 6)\*
8. Date: \_\_\_\_\_  
(insert a date that is ***ON OR AFTER*** the date the officer signed the **contract and bonds.**)

\* The name and signature inserted in lines 6 & 7 **must** be that of the **Clerk or Secretary** of the corporation.

## ATTESTATION

Pursuant to MG c. 62C, § 49A, the undersigned acting on behalf of the Contractor, certifies under the penalties of perjury that, to the best of the undersign's knowledge and belief, the Contractor is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.\*

\_\_\_\_\_  
\*\*Signature of Individual  
or Corporate Contractor (Mandatory)

\_\_\_\_\_  
\*\*\* Contractor's Social Security Number  
(Voluntary) or Federal Identification Number

By: \_\_\_\_\_  
Corporate Officer  
(Mandatory, if applicable)

Date: \_\_\_\_\_

\* The provision in the Attestation relating to child support applies only when the Contractor is an individual.

\*\* Approval of a contract or other agreement will not be granted unless the applicant signs this certification clause.

\*\*\* Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended. This request is made under the authority of GL c. 62C, § 49A.

## CITY OF NEWTON, MASSACHUSETTS

### PAYMENT BOND

Know All Men By These Presents:

That we, \_\_\_\_\_, as PRINCIPAL, and \_\_\_\_\_ as SURETY, are held and firmly bound unto the City of Newton as Obligee, in the sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_) to be paid to the Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date of \_\_\_\_\_, 2010, for the construction of \_\_\_\_\_ in Newton, Massachusetts.  
(Project Title)

Now, the conditions of this obligation are such that if the PRINCIPAL and all Sub-contractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the SURETY of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c. 30, sec. 39A, and M.G.L. c. 149 sec. 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force, virtue and effect.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this \_\_ day of \_\_\_\_\_, 2010.

PRINCIPAL

SURETY

\_\_\_\_\_

\_\_\_\_\_

BY \_\_\_\_\_  
(SEAL)

BY \_\_\_\_\_  
(ATTORNEY-IN-FACT) (SEAL)

\_\_\_\_\_

(Title)

ATTEST: \_\_\_\_\_

ATTEST: \_\_\_\_\_

**CITY OF NEWTON  
GENERAL CONDITIONS OF THE CONTRACT  
FOR PUBLIC WORKS CONSTRUCTION**

**ARTICLE 1**

**Definitions**

The word "Commissioner" shall mean the official duly authorized to act for the City of Newton in the execution of the work of this contract, acting directly or through properly authorized agents.

The word "Engineer," or "City Engineer," shall mean the City Engineer of the City of Newton, acting directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

The word "Contractor" shall mean the party or parties contracting to perform the work covered by this contract or his, or their, legal representatives, successors or assigns.

The word "Plan" shall mean plans referred to and included in the Project Manual for this contract. The word "City" shall mean the City of Newton.

The term "Substantial Completion" shall mean either that the work required by the contract has been completed except for the work having a contract price of less than one per cent of the then adjusted contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.

**ARTICLE 2**

**Plans, Drawings, Profiles**

1. The work shall be done in accordance with plans referred to in Article 1 and such further working and detail plans, drawings and profiles as may be furnished from time to time by the Engineer. All said plans, general and detail, are to be deemed a part of this contract, and the said plans, specifications and contract are to be considered together, so that any work mentioned in the contract, though not shown on the plans, and any work shown on the plans though not mentioned in the contract, is to be executed by the Contractor as a part of this contract. Figured dimensions are to prevail over scale. All things which in the opinion of the Engineer may fairly be inferred from the contract, plans and specifications, are to be executed by the Contractor as a part of the contract; and the Engineer shall be sole judge as to whether detail plans, drawings and profiles conform to the general plans and the contract.

**Discrepancy in Plans**

2. The Contractor shall carefully examine all said plans, profiles, drawings, specifications and orders; all figures, dimensions, lines, marks and scales thereof, and all directions of the Commissioner and the Engineer relating to the work, and conform to those in relation to which there is no doubt or discrepancy, but at once submit all cases of doubt or discrepancy to the Engineer for adjustment. Anything done on any part of the work for which special information or drawing should be procured, unless done in accordance with such information or drawing, or anything done in relation to which there is doubt or discrepancy, except in accordance with the adjustment thereof, or done in violation of law or public authority, is to be redone if the Commissioner shall so direct.

**ARTICLE 3**

**Inspection**

1. The Contractor in carrying on the contract shall conform to all determinations and directions of the Engineer relating to the proper interpretation of the plans, specifications, profiles or drawings, the fitness of persons employed on the work or the number thereof, or the suitability, amount, quality, and value of anything done or any materials used, and the Contractor shall permit the Commissioner and the Engineer and persons designated by them to enter upon the work and inspect the same at all times and in all places, and shall provide safe and convenient facilities for making such entry and inspection.

**ARTICLE 4**

**Change in Plans and Work**

1. The City, acting through the Commissioner and upon his written order only, from time to time given to the Contractor or his foreman, may change, increase or take away any part of the work, or change the specifications, plans, drawings, form or

materials thereof. Any deduction or addition thereto is to be allowed, or paid for at a price to be determined, within not more than 15 days of the completion of the change, by the City Engineer acting in the same capacity as an architect in a building contract as between owner and contractor. Any demand for addition or deduction must be made in writing to the City Engineer within seven (7) days of the time change was ordered.

## **ARTICLE 5**

### **Time and Manner of Doing the Work**

1. The Contractor shall begin work upon receipt of written Notice to Proceed. Once begun the work shall be carried out in a continuous and uninterrupted fashion with sufficient workforce and resources to assure completion by the date for completion established by the Contract Documents.

2. The Contractor shall carry on the work in accordance with the requirements of law and of all other public authorities, and to the satisfaction of the Commissioner; he shall give all notices, take out all permits, pay all charges and fees, give personal supervision to the work and keep thereon a competent foreman and sufficient employees, skilled in the several parts which are given them to do.

### **Maintenance of Travel**

3. The Contractor shall conduct his work so as to interfere as little as possible with public travel, and shall give property owners proper means of access to their property where existing access has been cut off by the work. The Contractor shall keep the streets open for through travel except where, in the opinion of the Commissioner, it is necessary to close the street. The continuous length of the street occupied for the work shall be kept as short as possible, and no part of the work shall be unnecessarily delayed. Wherever the Commissioner shall direct, trenches shall be bridged by the Contractor in a proper and secure manner so as not to interrupt travel. Free access shall be maintained at all times to all water gates, gas gates, and fire hydrants.

### **Abandonment of Work by Contractor**

4. In the event the City Engineer certifies to the Commissioner that the work is not being so carried forward or if the Contractor at any time is not carrying on the work to the satisfaction of the Commissioner, or is not observing any of the provisions of the contract, or has abandoned the work, or become insolvent or assigned his property, the City, acting by the Commissioner and at his discretion, may, with or without notice to the Contractor, or advertising for doing the work, and by contract, day labor or otherwise, do any part of the work which the Contractor has failed to do or replace any part not done to the satisfaction of the Commissioner, or take possession of the work and complete the same, and in doing so may use any implements, machinery or materials on or about the work which are the property of the Contractor, charging the Contractor any excess cost for completing the work, which excess cost the Contractor agrees to pay.

## **ARTICLE 6**

### **Compensation for Work**

1. Subject to the provisions of Paragraph 10 of this Article, the price named in the proposal and accepted by the City shall be paid by the City and received by the Contractor as full compensation for furnishing materials and for use of tools, forms, machinery and other implements, and for labor in moving materials and executing all the work contemplated in this contract, also for loss or damage arising from delay however occasioned, or out of the nature of the work aforesaid or from the action of the elements, from floods, or from any unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work and for well and faithfully completing the work in the proper manner and according to the plans and specifications and requirements of the Commissioner under them.

2. During the first week of each calendar month, the City Engineer shall cause all work done by the Contractor during the previous month to be measured and shall estimate the value thereof and, on or before the 10th of each month issue a certificate to the Commissioner of the measurements and the amount due the Contractor according to the terms of his contract.

3. The City shall pay the Contractor on approval of the Commissioner monthly on or before the 18th of each month for all work done during the preceding month according to the aforementioned certificate of the City Engineer, less 5 per cent of the amount of such work and less any amounts due the City by the Contractor.

### **Final and Substantial Completion**

4. Upon substantial completion of the work required by the Contract, the Contractor must present to the City Engineer written certification that the work is substantially complete. Within 21 calendar days after such certification is presented the City Engineer shall

present to the Contractor either a written declaration that the work is substantially complete or an itemized list of incomplete or unsatisfactory work items sufficient to demonstrate that the work is not substantially complete. The City Engineer shall include with such itemized list a date by which the work items must be completed, which date may not be earlier than the date for substantial completion established in the Contract Documents. If the City Engineer does not respond as provided herein within 21 calendar days, then the date of the Contractor's certification shall become the date for effective declaration of substantial completion.

5. Within 15 calendar days after the effective declaration of substantial completion, the City Engineer shall send to the Contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items. Unless delayed by causes beyond the Contractor's control, with an extension of time granted pursuant to Article 8, the Contractor must complete the work items within 45 calendar days after receipt of the list, or by the contractual completion date, whichever is later. If the contractor fails to complete the work within the required time the City may, notwithstanding other rights and remedies at its disposal, and upon seven days written notice to the Contractor terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the Contractor.

6. Within 65 calendar days following the effective declaration of substantial completion, the City Engineer shall issue to the Commissioner who shall cause to be paid to the Contractor a substantial completion estimate which estimate shall consist of the balance of the then current contract price less a one percent retention, the estimated cost to complete incomplete or unsatisfactory work items, the value of any outstanding claims against the Contractor and the sum of all demands for direct payment made pursuant to Article 12 herein, provided that until final acceptance, the City shall retain five percent of the value of all items planted in the ground.

7. The Contractor shall provide written notice to the City Engineer when the work has been brought to final completion. Within ten days following receipt of such notice, and providing his inspection shows no work items remain incomplete or unsatisfactory, the City Engineer shall issue to the Commissioner a final certificate of the total amount of work done and the money due the Contractor therefor, crediting thereon the amounts of the previous payments. In making the final certificate, the City Engineer shall not be bound by any preceding certificate or estimate of the amount of work done or materials furnished.

8. Within 30 calendar days following receipt of final completion, the City shall pay the Contractor, on the approval of the Commissioner, the percentages retained and the balance due the Contractor according to the aforementioned final certificate of the City Engineer less any indebtedness of the Contractor for incomplete or unsatisfactory work or claims made by or against the City. If a claim or claims are made, or notice of liability given, such amounts due the Contractor may be paid upon satisfaction of such claims or upon furnishing of indemnity to said City against all loss, cost, damage or expense by reason of such claims.

9. The City, on making any payment after the completion of the work, shall be released from all claim or liability to the Contractor for anything done or used, or for any loss or injury sustained in carrying on the contract, or for any act, omission, neglect or mistake of the City or any person relating to or affecting the contract, except for the balance of any sum retained as aforesaid.

### **Extra Work**

10. The Contractor shall be paid for any additions, or deductions as provided in Article 4, paragraph 1, and for extra labor done by, and for extra materials furnished by him in compliance with the written order only of the Commissioner, calling for work not similar in character to that covered by the items given in the proposal, and for which no price is set in the said written order, the direct (not including consequential) cost to the Contractor, as determined to be reasonable by the Commissioner, plus fifteen per cent of said costs as so determined in regard to labor only. For teams or trucks so furnished, no payment shall be made to the Contractor beyond the current local rate as determined by the Commissioner in each case. The direct cost of labor may include the cost of mechanics and laborers furnished and a reasonable proportion of the time of the foreman and timekeeper, but it shall in no case include any charge for the use of tools, for establishment charges or for time spent by the Contractor. The actual cost of insurance on extra pay rolls and of materials furnished for extra work, shall be paid without any addition. The labor and materials so ordered shall constitute a part of the work to be done under the contract; and all and singular the provisions of the contract shall apply to said labor and materials as if the same were specified therein. The Contractor shall have no claim for the above mentioned extra labor and materials unless he furnishes the details and bills therefor within one week after doing any such labor or furnishing any such materials.

11. No claim of the Contractor against the City under this contract shall be deemed valid unless such claim is presented to the Commissioner within ten days from the time when the Contractor first knows of, or has opportunity to know of, the acts and circumstances on which such claim is based.

12. A payment or payments to the Contractor, in cases where these provisions or any of them, are not complied with, shall not be construed as a waiver of said provisions or any part thereof.

## **Contract Made Subject to Appropriations**

13. This contract is made subject to appropriation heretofore made and shall not be altered unless the Contractor, the sureties on the bond, if any, the officer making the contract and the Mayor shall in writing agree thereto.

### **ARTICLE 7 Liquidated Damages**

1. In case the work embraced in the contract shall not have been substantially completed by the date stipulated therein, the Contractor shall pay to the City of Newton as liquidated damages a designated sum per calendar day for the entire period of overrun until the work is substantially completed in accordance with the following Schedule of Deductions, and in addition, the Contractor shall pay without reimbursement the entire cost of all traffic officers, railroad flagmen, inspectors, or other personnel the City Engineer and/or the Chief Engineer of the railroad determines to be necessary during the period of overrun of time.

#### **SCHEDULE OF DEDUCTIONS**

<u>Original Contract Amount</u>		<u>Daily Charge</u>
<u>From More Than</u>	<u>To and Including</u>	<u>Per Calendar Day</u>
\$ 0.	\$ 25,000.	\$ 30.
25,000.	50,000.	50.
50,000.	100,000	100.
500,000.	1,000,000.	150.
1,000,000.	2,000,000.	200.
2,000,000.	—	300.

2. In case the work embraced in the contract shall not have been brought to final completion within 45 calendar days following the date of declaration of substantial completion, the Contractor shall pay to the City of Newton as liquidated damages the sum of \$150.00 for each week or portion thereof during the period of overrun until the work is complete.

3. Whatever sum of money may become due and payable to the City of Newton by the Contractor under this Article may be retained out of money belonging to the Contractor in the hands and possession of the City of Newton. It is agreed that this Article shall be construed and treated by the parties to the contract not as imposing a penalty upon said Contractor for failing fully to complete said work as agreed on or before the time specified in the proposal, but as liquidated damages to compensate said City of Newton for all additional costs incurred by it because of the failure of the Contractor fully to complete said work on or before the date of completion specified in the proposal.

### **ARTICLE 8 Delays and Extensions of Time**

1. If the Contractor is delayed at any time in the progress of the work by an act or neglect of the City, or by changes in the work ordered by the City, or by unseasonably inclement weather, or by other causes deemed by the City Engineer to be beyond the Contractor's control, and which the City Engineer determines may justify delay, then the time for completion may be extended for such reasonable time as the City Engineer may determine.

2. No such extension of time will be allowed unless the Contractor submits a written request for an extension to the City Engineer no later than 10 calendar days of the start of the occurrence or event giving rise thereto. Each such request must describe the occurrence or event and specify the manner and extent that such occurrence or event is causing or has caused a delay in the work. The City Engineer shall promptly investigate each request and make his written determination to the Commissioner and the Contractor within 10 days after receipt of the request. In his determination the City Engineer may either grant, deny, or modify the length of the requested extension.

3. If the City Engineer's determination so warrants, the Commissioner shall authorize a written Change Order to the Contract extending the time for completion. No extension of time shall be deemed as granted until said Change Order has been duly executed by the parties.

4. Change Orders which may be executed by the City and the Contractor in connection with additions, extra labor and/or extra materials shall not be considered as allowing extensions of the time for completion unless the change order expressly specifies that additional time is allowed in connection with the work under the change order. Once a Change Order has been executed by the parties,



any request by the Contractor for an extension of time based solely on the fact that additions, extra labor and/or extra materials are required by the Change Order will be denied by the City Engineer.

5. Permitting the Contractor to continue and finish the work or any part of it after the times fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of the City of Newton of any of its rights under the contract. The Contractor remains liable for damages caused other than by delay.

## **ARTICLE 9**

### **Lines and Grades**

1. The Contractor shall retain a Registered Land Surveyor who shall furnish such boards and stakes and cause to be placed thereon, such lines, marks and directions relating to the work as the Commissioner or City Engineer shall from time to time direct.

## **ARTICLE 10**

### **Public Service Pipes and Conduits**

1. The Contractor shall maintain such pipes or conduits of public service corporations or of the City as are across or within the lines of the work until such time as said public service corporations or the City assume the maintenance or removal of said pipes or conduits. The Commissioner will notify such public service corporations to that effect on the existence of such obstructions to the work being brought to his notice by the Contractor. The City will relocate either temporarily or permanently all water mains and water service pipes, or hydrants, and drains or sewers which may interfere with the work contemplated in this contract. (This clause is not to be construed as applying to such pipes as may be readily supported and protected during the progress of the work.) The cost of shutting off and turning on water in water mains during blasting shall be assumed by the City.

### **Protection of Existing Structures**

2. All existing gas pipes, water pipes, sewers, drains, conduits, or other structures which are uncovered by the excavation shall be carefully supported and protected from injury by the Contractor, and, in case of injury, they shall be restored by him, without compensation therefor, to as good condition as that in which they were found, and shall be kept in repair until 6 months after the completion of the work. The Contractor shall provide suitable temporary channels for water at all water courses. Wherever the work passes under or adjacent to street railway tracks, the Contractor shall make all necessary arrangements with the railway company for doing any work which may affect the property of the company or interfere with the operating of the railway, and he shall be liable for any damage that may be caused by any act, omission or neglect on his part, and shall pay all expenses of every kind incidental to this work.

### **Changing the Location of Existing Structures**

3. Whenever it becomes necessary to change the location of any water or gas pipes, sewers, drains, conduits or other structures not otherwise provided for in these specifications, the Contractor shall do the whole or such portions of the work of making such changes as the Commissioner may require, and shall receive in payment therefor the reasonable cost of the work done as determined by the Commissioner plus 15 per cent of such cost. In estimating such cost, no allowance shall be made to the Contractor for the use of tools not especially provided for this work, for general superintendence, or for any overhead expenses except liability insurance.

## **ARTICLE 11**

### **Co-operation with Other Contractors**

1. The Contractor shall conduct the work in such manner as not to interfere with other work being done by the City, by contract or otherwise, and if deemed necessary by the Commissioner, the work under this contract shall conform to the progress of said other work; shall co-operate with other contractors or employees who may be doing work for the City, and with public service corporations affected by the work, in arranging for storage places, connections, bracings, temporary support for structures, repairs, etc.

## **ARTICLE 12**

### **Subcontracts**

1. The Contractor, in any contract with a Subcontractor, shall provide that the Subcontractor shall be subject to all specifications, terms, provisions, conditions, requirements and liabilities set forth in this contract so far as such specifications, terms, provisions, conditions, requirements and liabilities are applicable to the work to be done under such Subcontract, and shall also provide that

such Subcontract shall be terminated by the Contractor whenever the Commissioner shall certify to him in writing that in his opinion the work of the Subcontractor is unnecessarily or unreasonably delayed or that the Subcontractor has violated any of the provisions of this contract. The Contractor shall at once terminate such subcontract if the Commissioner, after certifying as aforesaid, shall in writing direct the Contractor to make such termination.

2. Subcontracts shall be made in writing and the Contractor shall furnish the Commissioner with a copy of his subcontracts on demand.

3. Pursuant to the provisions of M.G.L. Ch. 30, Sec. 39F (1), the following provisions are included in the General Conditions:

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring the payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of the subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority, the demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of the completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after which the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work (ii) specified in any court proceedings barring such payment, or, (iii) if the reply shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of

receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

### **ARTICLE 13**

#### **Responsibility for Work-Contractor's Responsibility**

1. The Contractor has made his proposal from his own examinations and estimates, and shall not hold the City, its agents, or employees, responsible for or bound by, any schedule, estimate, sounding, boring, or any plan of any part of the work; shall, if any error in any plan, drawing, specification or direction relating to anything to be done under the contract come to his knowledge, report it at once to the Commissioner; shall not, except as the Commissioner shall authorize in writing, assign or sublet any part of the contract except for the supply of materials and plant, or of anything to be done thereunder; shall, subject to the provisions of the contract take all responsibility of, and bear all losses resulting to him in carrying on the contract, and shall assume the defense of, and hold the City, its agents and employees harmless from all suits and claims against them, or any of them, arising from the use of any invention, patent or patent right, material, labor or implement, by or from any act or omission or neglect of the Contractor, his Subcontractor, his agents or employees, in carrying on the contract, or for any liability of any nature arising under the contract. The Contractor shall be solely responsible and liable for, and shall fully protect and indemnify the City against all claims for damages to persons or property occasioned by or resulting from blasting or other methods or processes in the work of construction, whether such damages be attributable to negligence of the Contractor, his employees or his Subcontractor or otherwise.

### **ARTICLE 14**

#### **LIGHTS--GUARDS**

1. The Contractor shall assume all responsibilities of the work and take all proper precautions to protect persons and property from injury and unnecessary interference; leave a reasonably unobstructed way along public and private places for pedestrians, teams, and vehicles, and for access to hydrants; provide proper walks over or around any obstruction made in a public or private place in carrying on the contract, and maintain from the beginning of twilight through the whole of every night, on or near the obstruction sufficient lights and guards to protect travelers from injury thereby, and if, after one notification from the Commissioner that said lights and guards are not sufficient, the Contractor has not placed additional lights and guards to the satisfaction of the Commissioner, the Commissioner shall have the right to take charge of that part of the work at the expense of the Contractor. While the work is suspended he shall keep all roadways and sidewalks in proper condition, and when the work is completed put the place and vicinity in proper condition and so leave them.

The Contractor shall provide proper means of access to property where the existing access is cut off by the Contractor and replace or put in good condition every conduit, catch-basin, tree, wall, fence, or other thing injured by the Contractor in carrying on the contract, unless the same has been permanently done away with, on approval of the Commissioner, as being necessary to the proper carrying on of the contract.

### **ARTICLE 15**

#### **Guaranty**

1. Any settlement or other defect, or the failure of any part of the structure or the work due to defective materials or workmanship, that occurs within one year after the work is completed, is to be immediately repaired by the Contractor. In the event of any such settlement, defect, or failure causing liability to the City for damage to persons or property, the Contractor does by this clause agree to hold the City harmless and to assume the defense of any claims therefor.

2. Responsibility under this guaranty for the adequacy of the work does not relieve the Contractor of his obligation to comply with the terms of the contract and to conform to all the requirements of the plans and specifications, nor does it give him the right to deviate in any way from the details of design of the structure or the work.

### **ARTICLE 16**

#### **Defective Work and Materials**

1. The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his contract as herein described, and defective work shall be made good and unsuitable materials may be rejected, notwithstanding that such work and materials have been previously overlooked by the Engineer and accepted or estimated for payment. If the work or materials, or

any part thereof shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Engineer, and if any material brought upon the ground for use in the work or selected for the same, shall be condemned by the Engineer as unsuitable or not in conformity with the specifications, the Contractor shall forthwith remove such materials from the vicinity of the work. Nothing in this contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the work or the soil, but all materials shall, upon being so attached or affixed, become the property of the City of Newton.

#### **ARTICLE 17**

##### **Employment of Labor**

1. The Contractor shall give preference in employment, first to citizens of Massachusetts, second, to other citizens of the United States; and shall allow all employees on said work to lodge, board and trade where they choose, and shall not obstruct any other person in doing work for the City; and shall conform to all labor laws of the Commonwealth; and no laborer or teamster, workman or mechanic working within this Commonwealth in the employ of the Contractor or Subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by the Contractor shall be requested to, or required to, or work more than eight hours in any one calendar day. This contract is subject to all the laws of the Commonwealth, and ordinances of the City and if any clause thereof does not conform to such laws and ordinances, such clause shall be void and such laws and ordinances operated in lieu thereof.

#### **ARTICLE 18**

##### **Laws and Regulations - Contractor to Comply with Law**

1. The Contractor shall keep fully informed of all existing or future acts of the legislature, and of all municipal ordinances, prohibitions, rules and regulations in any manner affecting the conduct of the work, and of all orders or decrees of any body or tribunal having any jurisdiction or authority over the materials, times, places and actions of those employed in the work embraced in the contract. The Contractor shall at all times observe and comply with all existing and future acts, ordinances, prohibitions, rules, regulations, orders and decrees; and shall protect and indemnify the city and its employees against any and all claims arising from or based on any violation of such acts, ordinances, prohibitions, rules, regulations, orders or decrees, and against all violations of law by the Contractor or his agents or employees.

**END OF SECTION**

**CITY OF NEWTON**

**MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN**

**DECEMBER 1, 1999**

**STATEMENT OF POLICY:**

Whereas it is the policy of the government of the United States of America, the Commonwealth of Massachusetts and the City of Newton that no person shall be discriminated against in any manner whatsoever on the grounds of race, religion, color, sex, handicap or national origin; and

Whereas, it is the policy of the government of the United States of America that no person shall, on the grounds of race, color, sex or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program of activity funded entirely or in part by the City, the State or Federal government; and

Whereas, it is the policy of the government of the United States of America to encourage that Minority/Women Business Enterprises shall have the maximum practicable opportunity to participate in Federal and State assisted projects; and all City funded contracts; and

Whereas, it is the policy of the City of Newton to encourage that minority/women business enterprises shall have the maximum practicable opportunity to participate in all City funded contracts; and

Whereas, the City of Newton, as a recipient of Federal and State funds subscribes to the above policies and will fully comply With Federal, State and local laws and directives governing non-discrimination, equal opportunity and affirmative action in all municipal activities; and

Whereas, to further enunciate the equal opportunity policy of the City of Newton's Minority/Women Business Program, the following responsibilities are specified

This MINORITY/ WOMEN Business Enterprise Plan sets forth the administrative standards for the further implementation of the City of Newton's policy of the utilization of minority contractors and subcontractors.

The City of Newton strongly affirms that it will not discriminate in any contractual procedures against any persons because of race, color, religion, age, disability, sex or national origin. This policy shall be administered with a positive supportive attitude.

It is the responsibility of the City of Newton to take affirmative steps to implement this policy to insure equality of opportunity in conducting the Program including notifying those persons and businesses doing business with the City, that contracts for goods, services and construction, shall be made Without reference or regard to race, color, sex, age, handicap, religion or national origin.

David B. Cohen Mayor



CITY OF NEWTON  
MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN

DECEMBER 1, 1999

**I. DEFINITIONS:**

**A. Minority Person-** the term includes a person who is of Black Hispanic, Asian, American Indian or Cape Verdean origin.

**B. Minority Business Enterprise (MBE)** -- the term shall mean a business a) that is certified by SOMWBA; or b) 1 provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a minority person,
- a partnership or joint venture controlled by minority persons in which at least 51 % of the ownership interest is held by minority persons or,
- a corporation or other entity controlled by minority persons and in which at least 51 % of the stock is owned by one or more minority persons.

**C. Contract Compliance Officer** - the Chief Procurement Officer or his/her designee responsible for the implementation of Newton's Minority/Women Enterprise Plan ("MWBE Plan") and activities.

**D. MCAD** - Massachusetts Commission Against Discrimination.

**E. SOMWBA** -- State Office of Minority/Women Business Assistance,

**F. City** - The City of Newton.

**G. Women Business Enterprise (WBE)** - the term shall mean a business a) that is certified by SOMWBA; or b) provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a woman.
- a partnership or joint venture controlled by women in which at least 51% of the ownership interest is held by women, or
- a corporation or other entity controlled by women and in which at least 51% of the stock is owned by one or more women.

**H. MWBE** – Minority or Women Business Enterprise

**II. GOALS:**

Newton's Minority/Women Enterprise Plan ("MWBE Plan") shall be guided by the goals presented below to promote minority/women opportunities within the City.

These goals comprise the framework for those activities to be implemented as part of the MWBE Plan:

To take affirmative action in expanding opportunities for minority and women owned firms in obtaining contracts within the City of Newton.

To assure that all contractors, regardless of race color, religion, creed, national origin, sex, age, ancestry or handicap, shall have equal opportunity to City contracting activities.

To award, of the total annual City contract dollars expended, 10 percent to MBE and 5 percent to WBE for construction; for goods and services, 5 percent WBE and 5 percent MBE.

### **III. SOLICITATION ACTIVITIES:**

To notify MWBEs of upcoming contracts for construction, professional services and supplies, funded in whole or in part with Federal, State, and City funds, the following activities will be undertaken. In addition on a regular basis, the City of Newton will distribute to its listing of MWBEs and SOMWBA, a summary of upcoming contract opportunities which are subject to the City's MWBE Plan.

#### **A. Construction Contracts**

All construction contracts with an estimated value over \$50,000 will be formally advertised within local, regional, minority and special interest publications at least 14 days prior to the bid opening date.

For all such construction contracts a "Notice of Solicitation" of a project going out to bid will be distributed to appropriate SOMWBA or City certified firms at least 14 days prior to the bid opening date.

#### **B. Contracts for Professional Services**

The City of Newton will send notification of its advertised Request for Proposals to appropriate SOMWBA or City certified firms. Responding MWBE firms will be considered for contract award within the bounds of generally accepted management practice or with the applicable procurement law relating to securing the lowest cost and best services available.

#### **C. Procurement of Supplies**

The City of Newton will (where feasible) utilize MWBEs for the procurement of supplies in accordance with City purchasing procedures. These efforts will be documented and reported to MCAD, and the Mayor's office on a quarterly basis.

### **IV. CONSTRUCTION ACTIVITIES:**

#### **A. Goals**

The City of Newton bid documents and contracts with an estimated value over \$50,000 will contain the City's goal of 10% for MBE and 5% for WBE utilization for subcontracts,

#### **B. Pre-Bid Conference**

To affirmatively further the opportunities available to prospective bidders, the City will hold a pre-bid conference 5-7 days prior to the bid opening date for all City construction contracts and subcontracts with an estimated value over \$50,000.

The pre-bid conference will provide an opportunity for contractors to: review and clarify the technical requirements of the projects, review the City's MWBE Plan; and review Equal Opportunity requirements. The City will advertise this conference and extend invitations to interested contractors as part of the notice of solicitation.

**C. Bid Submission**

All bids for City of Newton contracts with -an estimated value over \$50,000 shall include a certification of intent to be completed by the bidder swing his/her intent to comply with the City's MWBE Plan. Failure to include this certification shall be an informality which may be waived if such certification is received prior to the award of the contract.

**D. Contract Execution**

Upon notification of award of the contract, the bidder shall provide a written plan detailing how it will comply with the MWBE Plan

**E. Monitoring**

Throughout the duration of the contract, the City of Newton through its Contract Compliance Officer, will monitor the progress and activities of all contractors and subcontractors as they attempt to comply with the MWBE Plan.

**F. Enforcement**

In the case of clear neglect to make a good faith effort to comply with this MWBE Plan, the City of Newton reserves the right to designate contractor, after a hearing, as ineligible for future City bid awards.

**V. CONTRACT COMPLIANCE OFFICER/DUTIES AND RESPONSIBILITIES:**

The Contract Compliance Officer, as liaison between minority firms and the City of Newton will have the overall responsibility for the implementation of Newton's MWBE Plan. Thi's responsibility includes the development, management, dissemination of information; the provision of technical assistance to minority firms including clarification of procedures to be implemented; maintenance of relevant documentation; completion of reporting requirements; and performance of monitoring and evaluation activities; and maintenance and updating of listings of minority/women business.

The Contract Compliance Officer has oversight of all City procurements for construction, professional services and supplies and shall coordinate the implementation of the MWBE Plan with other City departments.



**THE CITY OF NEWTON, MASSACHUSETTS**  
**SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY**  
**ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM**

- I. The requirements hereinafter set forth apply to construction contracts which involve an expenditure by the City of \$50,000 or more.
- II. For purposes of this contract "minority" refers to Asian Americans, Black, Hispanics American Indians and Cape Verdeans. The City refers to the- City of Newton
- III. During the performance of this contract the Contractor and all of (his) Subcontractors (hereinafter collectively referred to as the Contractor) , for himself, his assignees, and successors ,in interest, agree as follows:
  1. In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to, the following: layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and the selection of apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the City setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (MGL Chapter 151B) . (See Attachment A)
  2. In connection with the performance of work under this contract, the Contractor shall undertake in good faith, affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any effects of such discrimination -in the past. Such affirmative action shall. entail positive and aggressive measures to ensure equal employment: opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, 'Layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall. include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex. A 'purpose of- this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future City public construction projects
- IV.
  1. As part of this obligation of remedial action under the foregoing section, the contractor shall maintain on this project a not less than 5 percent ratio of minority employee man hours to total man hours in each job category, including, but not limited to, bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Section 44C of Chapter 149 of the Massachusetts General Laws.
  2. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals, from the Contractor's affirmative action program approved by the City, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the City.
- V.
  1. At the discretion of the City, there may be established for the life of this contract a body to be known as the Liaison Committee, The Liaison Committee shall be composed of the Compliance Officer and one representative each from the Departments administering this project, hereinafter called the administering Departments, and such other representatives as may be designated by the City.
  2. The Contractor (or, his/her agent, if any, designated by him/her as the onsite equal employment opportunity officer) shall recognize the Liaison Committee as the affirmative action body, and shall establish a continuing working relationship with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

3. The Contractor shall prepare manning tables on a quarterly basis.\* These shall be broken down into projections, by week, for workers required in each trade. Copies shall be furnished one week in advance of the initiation of work and quarterly thereafter to the City and to the Liaison Committee.
4. Records of employment referral orders, prepared by the Contractor, shall be made available to the City and to the Liaison Committee on request.
5. The contractor shall prepare weekly reports in a form approved by the City of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these reports shall be provided at the end of each week to the City and to the Liaison Committee.

\* If job is less than three months, prepare for length of job.

- VI. If the Contractor shall use any sub contractor on any work performed under this contract, he/she shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the State Office of: Minority *Business Assistance* or As designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.
- VII. In the employment of journeyman, apprentices, trainees, and advanced trainees, the Contractor shall give preference to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States
- VIII. A designee of the City and a designee of the Liaison Committee shall each have the right of access to the Construction site,
- IX. **Compliance with Requirements**  
The Contractor shall comply with the provisions of Chapter 151B of the Massachusetts General Laws, which are herein incorporated by reference and made as amended by Executive Order 227, and of Chapter 151B as amended, of the Massachusetts General Laws, both of which are herein incorporated by reference and made a part of this contract.
- X. **Non-Discrimination**  
The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on the grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of sub-contractors, or in the procurement of materials and rentals of equipment.
- XI. **Solicitations for sub-Contracts and for the Procurement of Materials and Equipment**  
In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under his contract relative to non-discrimination and affirmative action.
- XII. **Bidders Certification Requirement**
  1. The following certification statement will be inserted in the bid document just above the bidder's signature.  
  

"The bidder hereby certifies he shall comply with the minority manpower ratio and specific action steps contained in the City of Newton, Massachusetts Supplemental Equal Employment-- Opportunity Anti-Discrimination and Affirmative Action Program. The Contractor receiving the award of the contract



shall be required to obtain from each of its subcontractors and submit to the contracting or, administering agency prior to the performance of any work under said contract a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in the City of Newton Massachusetts Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program.

**XIII. Contractor's Certification**

A Contractor's certification form must be signed by all successful low bidders prior to award by the City. A Contractor shall not be eligible for award of a contract unless the contractor has executed and submitted the Contractor's Certification, which shall be deemed a part of the resulting contract. (See Attachment B)

**XIV. Subcontractor's Certification**

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit: to the Prime Contractor a subcontractor's certification setting forth the subcontractor's compliance with this program, which shall be deemed a part of the resulting subcontract. (See Attachment C)

**XV. Compliance - Information, Reports and Sanctions**

1. The Contractor will provide all information and reports Required by the administering department or, the City on instruction issued by either of them and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the City to affect the employment of personnel. This provision shall apply only to information pertinent to the City's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering department or the City as appropriate and shall set forth what efforts he/she has made to obtain the information.
2. Whenever the administering department, the City, or the Liaison Committee believes the General Contractor or any Subcontractor may not-, be operating in compliance with the terms of this Section, the City directly, or through its designated agent, shall conduct: an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the City or its agent finds the General Contractor or any Subcontractor not in compliance, it shall make a preliminary report on non-compliance, and notify such Contractor in writing of such steps as will in the judgement of the City or its agent bring such Contractor into compliance. In the event, that such Contractor fails or refuses to fully perform such steps, the City shall make a final report of non-compliance, and recommend to the administering department the imposition of one or more of the sanctions listed below. If, however, the City believes the General Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. within fourteen days at the receipt of the recommendations of the City, the administering department shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:
  - (a) The recovery by the administering department from the General Contractor of 1/100 of 11 of the contract award price or \$1000 whichever sum is greater, in the nature of liquidated damages or if a Subcontractor is in non-compliance, the recovery by the administering department from the General Contractor, to be assessed by the General Contractor as a back charge against the Subcontractor, of 1/10 of 1% of the sub-contract price, or \$400 whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply
  - (b) The suspension of any payment of part thereof due under the contract until such time as the General Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;
  - (c) The termination, or cancellation, of the contract, in whole or in part, unless the General Contractor or any Subcontractor is able to demonstrate within a specified time his/her compliance with the terms of the City's affirmative action construction contract requirements; OR,

(d) The denial to the General Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering department for a period of up to three years.

3. If at any time after the imposition of one or more of the above sanctions (unless the contract has been terminated), a Contractor is able to demonstrate that he/she is in compliance with this section, he/she may request the City to suspend the sanctions conditionally pending a final determination by the City as to whether the Contractor is in compliance. Upon final determination of the City, the administering department, based upon the recommendation of the City, shall either lift the sanctions or continue them.
4. Sanctions enumerated under Section XV shall not be imposed by the City except after the General Contractor or Subcontractor have had an opportunity for full and fair hearing with City. The non-compliance investigation shall be initiated without prior notice to the contractor. Any sanctions to be imposed shall be, set forth fully and completely in writing, and may then be appealed to the City in writing by the Contractor.

.XIV. **Severability**

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

# FAIR EMPLOYMENT LAW

The Fair Employment Law declares that it is illegal to discriminate on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability

## IT IS UNLAWFUL:

- to print or circulate any advertisement or use any application form which directly or indirectly specifies any limitation on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to discharge or refuse to hire any individual on the basis of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry, or disability.
- to discriminate against any individual in matters relating to compensation, terms, conditions, or privileges of employment because of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to require a woman to leave her job at some arbitrary stage in her pregnancy or to refuse to let her return to work until a specified time set by the employer.
- to grant a female employee at least eight weeks leave for purposes of childbirth or to treat her absence differently than any other absence due to disability.
- to require an employee to remain at work during any day or part thereof that s/he observes as a religious holiday provided that the employee gives a ten-day notice and the absence does not cause undue hardship to the employer.
- to discharge or refuse to hire any person because of their failure to furnish information concerning admission to a center for the treatment of mentally ill persons.
- to discriminate against a job applicant for failure to furnish information, written or oral, concerning:- A) an arrest, detention or disposition regarding a violation of law in which no conviction resulted; B) a first conviction for any of the following misdemeanors: driving under the influence, simple assault, speeding, minor traffic violations, disturbance of the peace; or C) conviction for a misdemeanor where the date of the conviction or end of period of incarceration, if any, occurred more than five years prior to the employment application, and the applicant has not been convicted of any offense within the five years immediately before the date of application.

## RETALIATION

It is illegal to retaliate against any person because s/he has opposed any practices forbidden under this Chapter or because s/he has filed a complaint, testified, or assisted in any proceeding before the Commission. It is also illegal to aid, abet, incite, compel or coerce the doings of any of the acts forbidden under this Chapter or to attempt to do so.

## SEXUAL HARASSMENT

**151B:1,18** The term "sexual harassment" shall mean sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when (a) submission to or rejection of such advances, requests or conduct is made either explicitly or implicitly a term or condition of employment, or as a basis for employment decisions: (h) such advances,, requests or conduct have the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating or sexually offensive work environment.

## COMPLAINTS

All complaints must be filed in writing. Information on the filing of complaints can be obtained by contacting the MASSACHUSETTS COMMISSION AGAINST DISCRIMINATION at the following locations:

Boston office:  
One Ashburton Place  
Room 601  
Boston, MA 02108  
(617) 727-3990

Springfield office:  
436 Dwight Street  
Suite 315  
Springfield, MA 01103  
(413) 739-2145



## **Attachment B**

### **CITY OF NEWTON**

#### **Contractors Certification**

A Contractor will not be eligible for award of a contract, unless such contractor has submitted the following certification, which is deemed a part of the resulting contract.

#### CONTRACTOR'S CERTIFICATION

\_\_\_\_\_  
Contractor's Name Certifies that:

it tends to use the following listed construction trades in the work under the contract

\_\_\_\_\_ and

2. will comply with the minority manpower ration and specific affirmative action steps contained herein; and
3. will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

\_\_\_\_\_  
(Signature of authorized representative of Contractor)

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

## Attachment C

### CITY OF NEWTON

#### Subcontractors Certification

Prior to the award of any subcontract , regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting subcontractor.

#### SUBCONTRACTOR`S CERTIFICATION

\_\_\_\_\_  
Contractor's Name Certifies that:

it tends to use the following listed construction trades in the work under the contract

\_\_\_\_\_ and

will comply with the minority manpower ration and specific affirmative action steps contained herein; and

will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

Pursuant to M.G.L. Ch. 62C, Sec. 49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

\_\_\_\_\_  
(Signature of authorized representative of Contractor)

In order to ensure that the said subcontractor's certification becomes part of all subcontracts under the prime contract, no subcontract shall be executed until an authorizee representative of the Administrative Agency administering this project has determined in writing, that the said certification has been incorporated in such subcontract, regardless of tier, Any subcontract executed without such written approval shall be void.

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

## **CITY OF NEWTON**

### **WAGE RATE REQUIREMENTS**

#### **1. GENERAL**

- A.** This section summarizes the requirements for the payment of wages to laborers and mechanics employed under the Contract.
- B.** Other duties and requirements of law which may not be specified in this section apply and are inherently part of the Contract.

#### **2. WAGE RATES**

- A.** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of Labor and Industries. The schedule of prevailing wage rates will be updated annually for all public construction projects lasting longer than one (1) year. The contractor shall pay the prevailing wage rate set out in the applicable prevailing wage rate schedule. Increases in prevailing wage rates shall not be the basis for a change order.
- B.** Keep posted on the site a legible copy of said schedule. Keep on file the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Administrator, or the Architect.
- C.** Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.
- D.** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by M.G.L. c. 149, Sec. 34B, as amended. Such police officers shall be covered by Workmen's Compensation Insurance and Employers Liability Insurance by the Contractor.
- E.** The Contractor and all subcontractors shall, on a weekly basis throughout the term of the contract, provide to the City of Newton certified payroll affidavits verifying compliance with M.G.L. c. 149, Sec. 27, 27A and 27B.
- F.** The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- G.** The Contractor shall maintain accurate and complete records, including payroll records, during the Contract term and for three years thereafter. Filings made by the Contractor pursuant to Clauses 47, 48 and 49 of the General Conditions shall be deemed to constitute compliance with State filing requirements under the Massachusetts Prevailing Wage Law.

**END OF SECTION**





DEVAL L. PATRICK  
Governor  
TIMOTHY P. MURRAY  
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MABELL  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification	Effective Dates and Total Rates					
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT	12/01/2009	\$44,330	06/01/2010	\$44,930	12/01/2010	\$45,530
	06/01/2011	\$46,280	12/01/2011	\$46,940	06/01/2012	\$47,590
	12/01/2012	\$48,620				
(3 AXLE) DRIVER - EQUIPMENT	12/01/2009	\$44,400	06/01/2010	\$45,000	12/01/2010	\$45,600
	06/01/2011	\$46,350	12/01/2011	\$47,010	06/01/2012	\$47,660
	12/01/2012	\$48,690				
(4 & 5 AXLE) DRIVER - EQUIPMENT	12/01/2009	\$44,520	06/01/2010	\$45,120	12/01/2010	\$45,720
	06/01/2011	\$46,470	12/01/2011	\$47,130	06/01/2012	\$47,780
	12/01/2012	\$48,810				
ADSSUBMERSIBLE PILOT	08/01/2009	\$101,110	08/01/2010	\$104,640	08/01/2011	\$108,760
AIR TRACK OPERATOR	12/01/2009	\$47,850	06/01/2010	\$48,850	12/01/2010	\$50,100
	06/01/2011	\$51,100	12/01/2011	\$52,350		
ASBESTOS REMOVER - PIPE / MECH. EQUIPT.	12/01/2009	\$40,250				
ASPHALT RAKER	12/01/2009	\$47,350	06/01/2010	\$48,350	12/01/2010	\$49,600
	06/01/2011	\$50,600	12/01/2011	\$51,850		
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	12/01/2009	\$58,530	06/01/2010	\$59,780	12/01/2010	\$61,030
BACKHOE/FRONT-END LOADER	12/01/2009	\$58,530	06/01/2010	\$59,780	12/01/2010	\$61,030
BARC O-TYPE/JUMPING TAMPER	12/01/2009	\$47,350	06/01/2010	\$48,350	12/01/2010	\$49,600
	06/01/2011	\$50,600	12/01/2011	\$51,850		
BLOCK PAVER, RAMMER / CURB SETTER	12/01/2009	\$47,850	06/01/2010	\$48,850	12/01/2010	\$50,100
	06/01/2011	\$51,100	12/01/2011	\$52,350		
BOILER MAKER	10/01/2008	\$54,800				
APPRENTICE: BOILERMAKER - Local 29						
Ratio	Step	1	2	3	4	5
1:5	%	65.00	65.00	70.00	75.00	80.00
						85.00
						90.00
						95.00
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2010	\$68,010	08/01/2010	\$69,910	02/01/2011	\$70,900
	08/01/2011	\$73,000	02/01/2012	\$73,990		
APPRENTICE: BRICK/PLASTER/CEMENT MASON - Local 3 Newton						
Ratio	Step	1	2	3	4	5
1:5	%	50.00	60.00	70.00	80.00	90.00
BULLDOZER/GRADER/SCRAPER	12/01/2009	\$58,190	06/01/2010	\$59,430	12/01/2010	\$60,680
CAISSON & UNDERPINNING BOTTOM MAN	12/01/2009	\$48,250	06/01/2010	\$49,250	12/01/2010	\$50,500
	06/01/2011	\$51,500	12/01/2011	\$52,750		
CAISSON & UNDERPINNING LABORER	12/01/2009	\$47,100	06/01/2010	\$48,100	12/01/2010	\$49,350
	06/01/2011	\$50,350	12/01/2011	\$51,600		
CAISSON & UNDERPINNING TOP MAN	12/01/2009	\$47,100	06/01/2010	\$48,100	12/01/2010	\$49,350
	06/01/2011	\$50,350	12/01/2011	\$51,600		
CARBIDE CORE DRILL OPERATOR	12/01/2009	\$47,350	06/01/2010	\$48,350	12/01/2010	\$49,600
	06/01/2011	\$50,600	12/01/2011	\$51,850		

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 02/02/2010

Wage Request Number: 20100202-017

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DEVAL L. PATRICK  
Governor  
TIMOTHY P. MURRAY  
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MALLIN  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification

Effective Dates and Total Rates

CARPENTER											
APPRENTICE: CARPENTER - Zone 2 Eastern MA											
Ratio	Step	1	2	3	4	5	6	7	8		
1:5	%	50.00	40.00	70.00	75.00	80.00	80.00	90.00	90.00		
CEMENT MASONRY/PLASTERING											
CHAINSAW OPERATOR											
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES											
COMPRESSOR OPERATOR											
DELEADER (BRIDGE)											
DEMO: ADZEMAN											
DEMO: BACKHOE/LOADER/HAMMER OPERATOR											
DEMO: BURNERS											
DEMO: CONCRETE CUTTER/SAWYER											
DEMO: JACKHAMMER OPERATOR											
DEMO: WRECKING LABORER											
DIRECTIONAL DRILL MACHINE OPERATOR											
DIVER											
DIVER TENDER											
DIVER TENDER (EFFLUENT)											
DIVER/SLURRY (EFFLUENT)											
ELECTRICIAN											
APPRENTICE: ELECTRICIAN - Local 103											
Ratio	Step	1	2	3	4	5	6	7	8	9	10
23***	%	40.00	40.00	45.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00
App Prior 1A.03; 30.05.40.43.00.05.43.70/75.60											
ELEVATOR CONSTRUCTOR											

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 02/02/2010

Wage Request Number: 20100202-017

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THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Division of Labor  
LAURA M. MARLIN  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification

Effective Dates and Total Rates

APPRENTICE: ELEVATOR CONSTRUCTOR - Local 4

Ratio	Step	1	2	3	4	5
1:1	%	50.00	55.00	63.00	70.00	80.00

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

ELEVATOR CONSTRUCTOR HELPER	01/01/2010	\$51.330	01/01/2011	\$52.830	01/01/2012	\$54.330
FENCE & GUARD RAIL ERECTOR	12/01/2009	\$47.350	06/01/2010	\$48.350	12/01/2010	\$49.600
	06/01/2011	\$50.600	12/01/2011	\$51.850		
FIELD ENG. - INST. PERSON (BLDG, SITE, HVY CONST)	11/01/2009	\$55.850	05/01/2010	\$56.950	11/01/2010	\$58.190
	05/01/2011	\$59.430				
FIELD ENG. - ROD PERSON (BLDG, SITE, HVY CONST)	11/01/2009	\$40.870	05/01/2010	\$41.520	11/01/2010	\$42.250
	05/01/2011	\$42.980				
FIELD ENG. - CHIEF OF PARTY (BLDG, SITE, HVY CONST)	11/01/2009	\$57.210	05/01/2010	\$58.320	11/01/2010	\$59.570
	05/01/2011	\$60.820				
FIRE ALARM INSTALLER	09/01/2009	\$64.800	03/01/2010	\$66.030	09/01/2010	\$67.270
	03/01/2011	\$68.510				
FIRE ALARM REPAIR / MAINTENANCE	09/01/2009	\$52.870	03/01/2010	\$53.790	09/01/2010	\$54.720
	03/01/2011	\$55.660				
FIREMAN (ASST. ENGINEER)	12/01/2009	\$52.740	06/01/2010	\$53.810	12/01/2010	\$54.890
FLAGGER & SIGNALER	12/01/2009	\$36.300	06/01/2010	\$37.300	12/01/2010	\$37.300
	06/01/2011	\$38.300	12/01/2011	\$38.300		
FLOORCOVERER	09/01/2009	\$59.130	03/01/2010	\$59.630	09/01/2010	\$60.380
	03/01/2011	\$61.130	09/01/2011	\$62.380	03/01/2012	\$63.630

APPRENTICE: FLOORCOVERER - Local 2148 Zone 1

Ratio	Step	1	2	3	4	5	6	7	8
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00

Steps are 750 hrs.

FORK LIFT/CHERRY PICKER	12/01/2009	\$58.530	06/01/2010	\$59.780	12/01/2010	\$61.030
GENERATOR/LIGHTING PLANT/HEATERS	12/01/2009	\$47.890	06/01/2010	\$48.810	12/01/2010	\$49.740
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	01/01/2010	\$52.910				

APPRENTICE: GLAZIER - Local 35 Zone 2

Ratio	Step	1	2	3	4	5	6	7	8
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00

Steps are 750 hrs.

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2009	\$58.530	06/01/2010	\$59.780	12/01/2010	\$61.030
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This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27  
Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a  
violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the  
Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 02/02/2010

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Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MABELLY  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification Effective Dates and Total Rates

APPENDIX E: HIGHWAY ENG. - Local 4										
Ratio	Step	1	2	3	4	5	6	7	8	
1:4	%	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	
HVAC (DUCTWORK)						02/01/2010	\$63.470	08/01/2010	\$64.720	02/01/2011 \$65.970
						08/01/2011	\$67.220	02/01/2012	\$68.470	08/01/2012 \$69.720
						02/01/2013	\$70.970			
HVAC (ELECTRICAL CONTROLS)						09/01/2009	\$64.800	03/01/2010	\$66.030	09/01/2010 \$67.270
						03/01/2011	\$68.510			
HVAC (TESTING AND BALANCING - AIR)						02/01/2010	\$63.470	08/01/2010	\$64.720	02/01/2011 \$65.970
						08/01/2011	\$67.220	02/01/2012	\$68.470	08/01/2012 \$69.720
						02/01/2013	\$70.970			
HVAC (TESTING AND BALANCING - WATER)						09/01/2009	\$67.480	03/01/2010	\$68.730	
HVAC MECHANIC						09/01/2009	\$67.480	03/01/2010	\$68.730	
HYDRAULIC DRILLS						12/01/2009	\$47.850	06/01/2010	\$48.850	12/01/2010 \$50.100
						06/01/2011	\$51.100	12/01/2011	\$52.350	
INSULATOR (PIPES & TANKS)						09/01/2009	\$39.260	09/01/2010	\$61.660	
APPENDIX E: ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston										
Ratio	Step	1	2	3	4					
1:4	%	50.00	60.00	70.00	80.00					
Steps are 1 year										
IRONWORKER/WELDER						09/16/2009	\$39.560	03/16/2010	\$60.960	
APPENDIX E: IRONWORKER - Local 7										
Ratio	Step	1	2	3	4	5	6			
	%	60.00	70.00	75.00	80.00	85.00	90.00			
Structure 1: 4; Ornamental 1: 4										
JACKHAMMER & PAVING BREAKER OPERATOR						12/01/2009	\$47.350	06/01/2010	\$48.350	12/01/2010 \$49.600
						06/01/2011	\$50.600	12/01/2011	\$51.850	
LABORER						12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010 \$49.350
						06/01/2011	\$50.350	12/01/2011	\$51.600	
APPENDIX E: LABORER - Zone 1										
Ratio	Step	1	2	3	4					
1:3	%	60.00	70.00	80.00	90.00					
LABORER: CARPENTER TENDER						12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010 \$49.350
						06/01/2011	\$50.350	12/01/2011	\$51.600	
LABORER: CEMENT FINISHER TENDER						12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010 \$49.350
						06/01/2011	\$50.350	12/01/2011	\$51.600	

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Issue Date: 02/02/2010

Wage Request Number: 20100202-017

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DEVAL L. PATRICK  
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Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MARLIN  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification

Effective Dates and Total Rates

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010	\$49.350			
	06/01/2011	\$50.350	12/01/2011	\$51.600					
LABORER: MASON TENDER	12/01/2009	\$47.350	06/01/2010	\$48.350	12/01/2010	\$49.600			
	06/01/2011	\$50.600	12/01/2011	\$51.850					
LABORER: MULTI-TRADE TENDER	12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010	\$49.350			
	06/01/2011	\$50.350	12/01/2011	\$51.600					
LABORER: TREE REMOVER	12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010	\$49.350			
	06/01/2011	\$50.350	12/01/2011	\$51.600					
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines.									
LASER BEAM OPERATOR	12/01/2009	\$47.350	06/01/2010	\$48.350	12/01/2010	\$49.600			
	06/01/2011	\$50.600	12/01/2011	\$51.850					
MARBLE & TILE FINISHERS	02/01/2010	\$56.950	08/01/2010	\$58.470	02/01/2011	\$59.270			
	08/01/2011	\$60.950	02/01/2012	\$61.740					
APPRENTICE: MARBLE-TILE-TERRAZZO FINISHER - Local 3 Marble & Tile									
Ratio	Step	1	2	3	4	5			
1:3	%	50.00	60.00	70.00	80.00	90.00			
Step: an 800 hr.									
MARBLE MASONS, TILELAYERS & TERRAZZO MECH	02/01/2010	\$68.050	08/01/2010	\$69.950	02/01/2011	\$70.940			
	08/01/2011	\$73.040	02/01/2012	\$74.030					
APPRENTICE: MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile									
Ratio	Step	1	2	3	4	5			
1:3	%	50.00	60.00	70.00	80.00	90.00			
MECH. SWEEPER OPERATOR (NON-CONSTRUCTION)	07/01/2009	\$28.300	07/01/2010	\$29.000	07/01/2011	\$29.700			
MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/01/2009	\$38.190	06/01/2010	\$39.430	12/01/2010	\$60.680			
MECHANICS MAINTENANCE	12/01/2009	\$38.190	06/01/2010	\$39.430	12/01/2010	\$60.680			
MILLWRIGHT (Zone 1)	03/01/2009	\$54.400							
APPRENTICE: MILLWRIGHT - Local 11 Zone 1									
Ratio	Step	1	2	3	4	5	6	7	8
1:5	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00
MORTAR MIXER	12/01/2009	\$47.350	06/01/2010	\$48.350	12/01/2010	\$49.600			
	06/01/2011	\$50.600	12/01/2011	\$51.850					
OILER (OTHER THAN TRUCK CRANES, GRADALLS)	12/01/2009	\$41.750	06/01/2010	\$42.480	12/01/2010	\$43.220			
OILER (TRUCK CRANES, GRADALLS)	12/01/2009	\$44.720	06/01/2010	\$45.550	12/01/2010	\$46.380			
OTHER POWER DRIVEN EQUIPMENT - CLASS II	12/01/2009	\$38.190	06/01/2010	\$39.430	12/01/2010	\$60.680			
PAINTER (BRIDGES/TANKS)	01/01/2010	\$63.410							

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Issue Date: 02/02/2010

Wage Request Number: 20100202-017

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DEVAL L. PATRICK  
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THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MARLIN  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification Effective Dates and Total Rates

APPRENTICE: PAINTER - Local 35 Zone 2											
Ratio	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Step 8 min 750 hrs.											
PAINTER (SPRAY OR SANDBLAST, NEW) *						01/01/2010	\$54.310				
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.											
APPRENTICE: PAINTER - Local 35 Zone 2											
Ratio	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Step 8 min 750 hrs.											
PAINTER (SPRAY OR SANDBLAST, REPAINT)						01/01/2010	\$52.370				
APPRENTICE: PAINTER - Local 35 Zone 2											
Ratio	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Step 8 min 750 hrs.											
PAINTER (TRAFFIC MARKINGS)						12/01/2009	\$47.100	06/01/2010	\$48.100	12/01/2010	\$49.350
						06/01/2011	\$50.350	12/01/2011	\$51.600		
PAINTER / TAPER (BRUSH, NEW) *						01/01/2010	\$52.910				
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.											
APPRENTICE: PAINTER - Local 35 Zone 2											
Ratio	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Step 8 min 750 hrs.											
PAINTER / TAPER (BRUSH, REPAINT)						01/01/2010	\$50.970				
APPRENTICE: PAINTER - Local 35 Zone 2											
Ratio	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Step 8 min 750 hrs.											
PANEL & PICKUP TRUCKS DRIVER						12/01/2009	\$44.160	06/01/2010	\$44.760	12/01/2010	\$45.360
						06/01/2011	\$46.110	12/01/2011	\$46.770	06/01/2012	\$47.420
						12/01/2012	\$48.450				
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)						08/01/2009	\$60.220	08/01/2010	\$62.570	08/01/2011	\$65.320
PILE DRIVER						08/01/2009	\$60.220	08/01/2010	\$62.570	08/01/2011	\$65.320

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GEORGE NOEL  
Director of Labor  
LAURA M. MABELL  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification

Effective Dates and Total Rates

APPRENTICE: PILE DRIVER - Local 5 & Zone 1									
Ratio	Step	1	2	3	4	5	6	7	8
1:3	%	40.00	45.00	70.00	75.00	80.00	85.00	90.00	95.00
PIPEFITTER & STEAMFITTER						09/01/2009	\$67.480	03/01/2010	\$68.730
APPRENTICE: PIPEFITTER - Local 337									
Ratio	Step	1	2	3	4	5			
**	%	40.00	45.00	60.00	70.00	80.00			
**1:3; 3:1; 1:10 thereafter						Steps are 1 yr; Refrig/Mechanic Steps & Hrs Same as above			
Refrig/Mechanic **1:1; 1:2; 2:4; 3:4; 4:8; 5:10; 6:12; 7:14; 8:17; 9:20; 10:23(Max)									
PIPELAYER						12/01/2009	\$47.350	06/01/2010	\$48.350
						06/01/2011	\$50.600	12/01/2011	\$51.850
						09/01/2009	\$66.250	03/01/2010	\$67.500
PLUMBERS & GASFITTERS									
APPRENTICE: PLUMBER - Local 12									
Ratio	Step	1	2	3	4	5			
**	%	35.00	40.00	55.00	65.00	75.00			
**1:2; 2:4; 3:10; 4:14; 5:19						Steps are 1 year; Step 4 w/ license=70; Step 5 w/ license=80			
PNEUMATIC CONTROLS (TEMP.)						09/01/2009	\$67.480	03/01/2010	\$68.730
PNEUMATIC DRILL/TOOL OPERATOR						12/01/2009	\$47.350	06/01/2010	\$48.350
						06/01/2011	\$50.600	12/01/2011	\$51.850
POWDERMAN & BLASTER						12/01/2009	\$48.100	06/01/2010	\$49.100
						06/01/2011	\$51.350	12/01/2011	\$52.600
POWER SHOVEL/DERRICK/TRENCHING MACHINE						12/01/2009	\$58.530	06/01/2010	\$59.780
PUMP OPERATOR (CONCRETE)						12/01/2009	\$58.530	06/01/2010	\$59.780
PUMP OPERATOR (DEWATERING, OTHER)						12/01/2009	\$47.890	06/01/2010	\$48.810
READY-MIX CONCRETE DRIVER						05/01/2009	\$40.520	05/01/2010	\$41.080
								05/01/2011	\$41.690
RECLAIMERS						12/01/2009	\$58.190	06/01/2010	\$59.430
RESIDENTIAL WOOD FRAME CARPENTER **						04/01/2009	\$35.620		
** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement.									
As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.									
RIDE-ON MOTORIZED BUGGY OPERATOR						12/01/2009	\$47.350	06/01/2010	\$48.350
						06/01/2011	\$50.600	12/01/2011	\$51.850
ROLLERS/SPREADER/MULCHING MACHINE						12/01/2009	\$58.190	06/01/2010	\$59.430
ROOFER (Inc. Roofer Waterproofing & Roofer Dampproofg)						02/01/2009	\$53.860		

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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MARLIN  
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification Effective Dates and Total Rates

APPRENTICE: ROOFER - Local33											
Ratio	Step	1	2	3	4	5					
**	%	50.00	60.00	65.00	75.00	85.00					
**1.5, 2.4-10 times after 110 (or portion thereof)						Step 1 is 2000 hrs; Steps 2-5 are 1000 hrs.					
Booker (Banning): Same Step and Hour as Above **1.4; Times after 11											
SHEETMETAL WORKER						02/01/2010	\$63.470	08/01/2010	\$64.720	02/01/2011	\$65.970
						08/01/2011	\$67.220	02/01/2012	\$68.470	08/01/2012	\$69.720
						02/01/2013	\$70.970				
APPRENTICE: SHEET METAL WORKER - Local17-A											
Ratio	Step	1	2	3	4	5	6	7			
1.4	%	40.00	45.00	50.00	60.00	65.00	75.00	85.00			
Steps 1-3 are 1 year; Steps 4-7 are 6 mos.											
SIGN ERECTOR						06/01/2009	\$37.780				
APPRENTICE: SIGN ERECTOR - Local33 Zone2											
Ratio	Step	1	2	3	4	5	6	7	8	9	
1.1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	
Steps are 6 mos.											
SLATE / TILE / PRECAST CONCRETE ROOFER						02/01/2009	\$54.110				
SPECIALIZED EARTH MOVING EQUIP < 35 TONS						12/01/2009	\$44.620	06/01/2010	\$45.220	12/01/2010	\$45.820
						06/01/2011	\$46.570	12/01/2011	\$47.230	06/01/2012	\$47.880
						12/01/2012	\$48.910				
SPECIALIZED EARTH MOVING EQUIP > 35 TONS						12/01/2009	\$44.910	06/01/2010	\$45.510	12/01/2010	\$46.110
						06/01/2011	\$46.860	12/01/2011	\$47.520	06/01/2012	\$48.170
						12/01/2012	\$49.200				
SPRINKLER FITTER						09/16/2009	\$68.450	03/16/2010	\$69.700		
APPRENTICE: SPRINKLER FITTER - Local330											
Ratio	Step	1	2	3	4	5	6	7	8	9	10
1.1	%	40.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00
STEAM BOILER OPERATOR						12/01/2009	\$58.190	06/01/2010	\$59.430	12/01/2010	\$60.680
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN						12/01/2009	\$58.190	06/01/2010	\$59.430	12/01/2010	\$60.680
TELECOMMUNICATION TECHNICIAN						09/01/2009	\$52.870	03/01/2010	\$53.790	09/01/2010	\$54.720
						03/01/2011	\$55.660				
APPRENTICE: TELECOMMUNICATION TECHNICIAN - Local103											
Ratio	Step	1	2	3	4	5	6	7	8		
1.1	%	40.00	45.00	50.00	55.00	60.00	65.00	75.00	80.00		
TERRAZZO FINISHERS						02/01/2010	\$66.950	08/01/2010	\$68.850	02/01/2011	\$69.840
						08/01/2011	\$71.940	02/01/2012	\$72.930		

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Director of Labor  
LAURA M. MALLIN  
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Awarding Authority: City of Newton

Contract Number: 10-46

City/Town: NEWTON

Description of Work: Sewer Main Repair Services

Job Location: Various Locations

Classification Effective Dates and Total Rates

APPRENTICE: MARBLE TILE-TERRAZZO FINISHER - Local 3 Marble & Tile						
Ratio	Step	1	2	3	4	5
1:3	%	50.00	60.00	70.00	80.00	90.00
Steps are 800 hrs.						
TEST BORING DRILLER				12/01/2009	\$48,500	06/01/2010 \$49,500
				06/01/2011	\$51,750	12/01/2011 \$53,000
TEST BORING DRILLER HELPER				12/01/2009	\$47,220	06/01/2010 \$48,220
				06/01/2011	\$50,470	12/01/2011 \$51,720
TEST BORING LABORER				12/01/2009	\$47,100	06/01/2010 \$48,100
				06/01/2011	\$50,350	12/01/2011 \$51,600
TRACTORS/PORTABLE STEAM GENERATORS				12/01/2009	\$58,190	06/01/2010 \$59,430
				12/01/2009	\$45,200	06/01/2010 \$45,800
TRAILERS FOR EARTH MOVING EQUIPMENT				06/01/2011	\$47,150	12/01/2011 \$47,810
						06/01/2012 \$48,460
				12/01/2012	\$49,490	
TUNNEL WORK - COMPRESSED AIR				12/01/2009	\$59,430	06/01/2010 \$60,680
				06/01/2011	\$63,180	12/01/2011 \$64,430
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)				12/01/2009	\$61,430	06/01/2010 \$62,680
				06/01/2011	\$65,180	12/01/2011 \$66,430
TUNNEL WORK - FREE AIR				12/01/2009	\$51,500	06/01/2010 \$52,750
				06/01/2011	\$55,250	12/01/2011 \$56,500
TUNNEL WORK - FREE AIR (HAZ. WASTE)				12/01/2009	\$53,500	06/01/2010 \$54,750
				06/01/2011	\$57,250	12/01/2011 \$58,500
VAC-HAUL				12/01/2009	\$44,620	06/01/2010 \$45,220
				06/01/2011	\$46,570	12/01/2011 \$47,230
				12/01/2012	\$48,910	06/01/2012 \$47,880
WAGON DRILL OPERATOR				12/01/2009	\$47,350	06/01/2010 \$48,350
				06/01/2011	\$50,600	12/01/2011 \$51,850
WASTE WATER PUMP OPERATOR				12/01/2009	\$58,530	06/01/2010 \$59,780
WATER METER INSTALLER				09/01/2009	\$66,250	03/01/2010 \$67,500

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TIMOTHY P. MURRAY  
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



GEORGE NOEL  
Director of Labor  
LAURA M. MABELIN  
Commissioner of Division of Occupational Safety

**Awarding Authority:** City of Newton

**Contract Number:** 10-46

**City/Town:** NEWTON

**Description of Work:** Sewer Main Repair Services

**Job Location:** Various Locations

**Classification**

**Effective Dates and Total Rates**

**Additional Apprentice Information:**

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours) unless otherwise specified.

- \* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.
- \*\* Multiple ratios are listed in the comment field.
- \*\*\* The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:  
1 JM: 1 APP; 2-3 JM: 2 APP; 4-6 JM: 4 APP; 7-9 JM: 6 APP; 10-12 JM: 8 APP; 13-15 JM: 10 APP; etc.
- \*\*\*\* The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

**Issue Date:** 02/02/2010

**Wage Request Number:** 20100202-017

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## **The Massachusetts Prevailing Wage Law M.G.L. ch. 149, §§ 26 – 27**

### **NOTICE TO AWARDING AUTHORITIES**

- The enclosed wage schedule applies only to the specific project listed at the top and will be updated for any public construction project lasting longer than one (1) year.
- You should request an updated wage schedule from the Division of Occupational Safety if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.
- Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.

### **NOTICE TO CONTRACTORS**

- The enclosed wage schedule, and any updated schedule, must be posted in a conspicuous place at the work site during the life of the project.
- The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- The enclosed wage schedule applies to all phases of the project including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.
- All apprentices must be registered with the Massachusetts Division of Apprentice Training in order to be paid at the reduced apprentice rates. If a worker is not registered with the Division of Apprentice Training, they must be paid the “total rate” listed on the wage schedule regardless of experience or skill level. For further information, please call (617) 727-3486 or write to the Division of Apprentice Training, 399 Washington Street, 4th Floor, Boston, MA 02108

## WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor or public body shall furnish to the Department of Labor & Workforce Development/Division of Occupational Safety within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

### STATEMENT OF COMPLIANCE

\_\_\_\_\_, 20\_\_\_\_\_

I, \_\_\_\_\_,  
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the \_\_\_\_\_

(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature \_\_\_\_\_

Title \_\_\_\_\_

DIVISION OF OCCUPATIONAL SAFETY, 399 WASHINGTON STREET, 5TH FL., BOSTON, MA. 02108

## Print Name &amp; Title:

NOTE: Every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority.

## CITY OF NEWTON

### SUMMARY OF WORK AND SPECIFIC REQUIREMENTS OF THE CONTRACT FOR PUBLIC WORKS CONSTRUCTION

#### I. SUMMARY OF WORK

##### A. The Work under the Contract consists of:

1. This project consist of work in three (3) project zones. Zone 1 (Francis Street) is a sewer main extension of approximately 130 linear feet and (2) house service connections. Zones 2 and 3 are sewer main spot repairs and house service upgrades at Fraina Road and Oakdale Road respectively. Work at Farina Road includes approximately 40 linear feet of sewer main spot repair at a depth of approximately 13 feet with no house service connections. Work at Oakdale Road includes approximately 275 linear feet of sewer main repairs at an approximate depth of 5' - 6' and (9) house service connections. Farina and Oakdale Road(s) include by-pass pumping of the existing sewage flow under the scope of work.
2. All work described in the Project Manual and/or shown on the Plan(s) unless specifically indicated as not to be done.

##### B. In addition the work under the contract includes:

1. Work outside the Project Site as called for in the Project Manual and/or Plan(s) and as required for the performance of the work.
2. The restoration of any items damaged or destroyed by encroaching upon areas outside the Project Site.
3. All labor, materials, tools, and equipment necessary to do all the work required for the completion of each item as specified, which shall limited not only to the exact intent mentioned, but shall include incidental work necessary or customarily performed for the completion of that item.
4. All items not specifically mentioned or noted in the Project Manual and/or Plan(s), but which are obviously necessary to make a complete working installation.

##### C. The Proposed Contract Price shall be complete costs, including overhead, profit, insurance, transportation, and all other costs connected with, or incidental to the work described.

#### II. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

##### A. Upon notification the Contractor shall commence the work specified in the Project Manual as directed by the City. The work shall proceed in a continuous uninterrupted fashion with adequately staffed crews, in a satisfactory manner, which will assure that the work is completed in a timely manner to the satisfaction of the City.

##### B. The time for substantial completion pursuant to Article 2 of the Contract shall be **sixty (60) calendar days**.

##### C. Time is of the essence for the completion of this contract. If the Contractor fails to achieve substantial or final completion of the Work within the time required by the contract, and unless an extension of time is granted, the Contractor shall pay to the City as liquidated damages, the applicable amount specified in Article 7 of the General Conditions for each day of delay. If different completion dates are specified in the Contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another section in this Contract, liquidated damages shall not be due the City. The Contractor remains liable for damages caused other than by delay.

## INSURANCE REQUIREMENTS

- A. The Contractor shall carry and maintain until acceptance of the work such Workmen's Compensation, Automobile Liability, Commercial General Liability, Contingent Commercial General Liability, Property Damage and Contingent Property Damage Insurance, each including blasting coverage, as shall protect him and any sub-contractor performing work covered by this contract from all claims and liability for damages for personal injury, including accidental death, and for property damage which may arise from operations under this contract, whether such operations be by himself or by any sub-contractor or by any one directly or indirectly employed by either of them.
- B. The City shall be named as an additional insured on such policy.
- C. The amounts of such insurance shall be as follows:
1. Workmen's Compensation Insurance as required by Massachusetts General Law.
  2. Automobile Liability Insurance on all vehicles owned or hired for a.) Bodily Injury in an amount not less than \$500,000.00 for each occurrence, and not less than \$1,000,000.00 aggregate; b.) Property Damage in an amount not less than \$250,000.00 each occurrence, and not less than \$500,000.00 aggregate.
  3. Commercial General Liability Insurance and Contingent Commercial General Liability Insurance in an amount not less than \$500,000.00 for injuries, including accidental death to any one person, and subject to the same limit for each person, in an amount not less than \$1,000,000.00 on account of one accident.
  4. Property Damage Insurance and Contingent Property Damage Insurance in an amount not less than \$250,000.00 on account of one accident, and in an amount of not less than \$500,000.00 on account of all accidents.
  5. General Liability Insurance shall include Contractual Liability Insurance.
- D. Before any work is started, the successful bidder shall be required to file with the Chief Procurement Officer certificates of insurance coverage as detailed above, with policy numbers and dates of expiration.
- E. The Contractor shall indemnify, hold harmless and defend the City and its departments, officers, employees, servants, and agents from and against all actions, causes of actions, claims, demands, damages, costs, loss of services, expenses and compensation, including attorney's fees and interest arising out of or resulting directly or indirectly from the services rendered pursuant to this Contract, provided that any such action, cause of action, claim, demand, damage, cost, loss of service, expense, compensation (1) in any way grows out of bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, which (2) is caused in whole or in part by any act or omission of the Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

END OF SECTION



**CITY OF NEWTON**  
**SPECIAL CONDITIONS OF THE CONTRACT**  
**FOR PUBLIC WORKS CONSTRUCTION**

The following Special Conditions supplement the City of Newton General Conditions of the Contract for Public Works Construction. The following clauses relate in particular to this contract. In the event of conflict or ambiguity between the General Conditions and these Special Conditions, the Special Conditions take precedence and shall govern.

1. The Contractor shall provide such police officers as the Engineer deems necessary for the direction and control of traffic entering, passing through and leaving the site of the contract. Such officers shall wear regulation policemen's uniforms and fluorescent safety vests. The City will reimburse the Contractor for payments made for the services of all traffic officers. The Contractor is required to submit to the Engineer copies of evidence of payment.
2. Unless otherwise specified elsewhere in this contract or specifically directed by the Engineer, all excavated material shall be wasted off-site at the Contractors' expense. No City of Newton disposal area will be available for this purpose.
3. The Contractor shall make his own arrangements with the owners of land other than the City easements occupied by or used by him in the prosecution of this contract and shall hold the City harmless from any and all claims for damages caused by or arising from such occupation or use. All temporary roadways built to accommodate equipment, trucks, etc., shall be built at the Contractor's own expense.
4. The City does not guarantee the locations of existing pipes or underground conduits. The locations of these structures shown on the plans are approximate. In private lands where sprinkler systems, driveway, walk and step heating cables and/or heating pipes are encountered, the Contractor shall use due caution when excavating in the vicinity of these structures.
5. The City does not guarantee the nature of any material encountered in any excavation. The Contractor must make his own examination, by boring, test holes, or otherwise, for determining the nature of the material to be excavated or the conditions under which the work is to be performed, and make his bid in sole reliance thereon.
6. The Contractor shall clean up the entire project before the City will accept the work. All rubbish, tree stumps, boulders from any excavation, surplus excavated material, unless specifically ordered by the Engineer to do otherwise, or any other debris shall be disposed of by the Contractor. The entire area within the easements and all other areas disturbed by the Contractor shall be graded and left in a condition comparable to that as found originally and satisfactory to the Engineer. All the work mentioned in this paragraph shall be included in the Furnishing, Trenching and Laying Item.
7. All trenches and areas resurfaced by the Contractor shall be guaranteed against settlement, upheaval or failure of any kind for a period of one (1) year after the City accepts the work and he shall replace such resurfacing at his own expense. The City Engineer shall be sole judge as to what constitutes a failure and which portion of the resurfacing is to be replaced, and his decision shall be final.
8. Before starting the work and from time to time during its progress, as the Engineer may request, the Contractor shall submit to the Engineer a written description of the methods he plans to use in doing the work and the various steps he intends to take.
9. The terms "earth excavation" and "excavation" used throughout these specifications shall include all the material to be excavated and/or removed (except rock excavation) including peat, muck, roots, trees, stumps, and all other material necessary for the completion of the work to be done as specified.
10. The term "complete in place" used throughout these specifications shall include all the work to be done for the completion of the item as specified.
11. The Contractor shall cooperate with other Contractors, Utility Companies and/or City of Newton Departments that may be working on or near the work site covered by the contract. The Engineer will decide as to the respective rights of the parties involved and his decisions shall be final.
12. The Contractor shall assume all liability, financial or otherwise, in connection with this contract and shall protect and save harmless the City of Newton for any and all damages or claims that may arise because of inconveniences, delays or loss experienced by him because of the presence and operations of other Contractors, Utility Companies and/or City of Newton Departments working near or within the limits of the contract.



13. The Contractor shall begin on receipt of written orders to do so, and the work once begun shall be continuously carried forward with a force of men adequate in the opinion of the Engineer to complete the work in a reasonable and expeditious manner, inclement and unseasonable weather conditions excepted. In the event the Engineer determines that the Contractor has not begun work on written orders to do so, or that the work once begun has been abandoned without authority, then the Engineer shall give the Contractor seventy-two (72) hours notice (Sunday excepted) to begin work, or resume work in case of abandonment. Failure of the Contractor to act within this specified time shall be deemed a breach of this contract and the Contractor shall be held liable for any damage or expense arising from such breach of contract.
14. Upon commencement of the work the Contractor shall assume full charge and care thereof and he shall take every necessary precaution against injury or damage to the work by action of the elements, or from any cause whatever, whether arising from the execution or the non-execution of the contract. The Contractor shall bear all losses resulting to him on account of the amount or character of the work or because the nature of the land in or on which the work is done is different from what was estimated or expected, or on account of the weather elements or other causes.
15. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before the completion and final acceptance of the work, and shall bear the expense thereof.
16. All notices, demands, requests, instructions, approvals and claims must be in writing. Any such notice shall be deemed to have been given as of the time of delivery, or of actual receipt in the case of telegrams or, in the case of mailing, when it should have been received in due course of post. For communicating purposes, the office address of the Contractor shall be that stated on the signature page of the contract; that of the City shall be as stated in the Notice to Contractors. Any subsequent change in address of either party shall be communicated to the other in writing.
17. The City will furnish to the Contractor, without charge, all copies of the specifications reasonably necessary in the performance of the contract work.
18. The Contractor shall supply to the City the name and telephone number of a responsible person who may be contacted during off-hour emergencies on the project. The Contractor shall cooperate at all times with the City and the Project Manager, and ensure the cooperation of his key personnel and that of his subcontractors.
19. The work must be completed in a continuous uninterrupted operation. The Contractor must use sufficient men and adequate equipment to complete all the necessary work requirements within a minimum period of time. The work shall be conducted between the hours of 7:00 a.m. and 4:30 p.m. on Monday through Friday. No work shall be done on holidays, Saturdays or Sundays other than for emergencies, or unless specifically authorized by the City.
20. The Contractor shall, with each monthly invoice submitted during the term of this Contract, submit to the City two (2) legible copies of his payrolls documenting the wages paid to all employees performing on site labor relating to the work of this Contract. These copies shall be prepared on forms supplied by the City.
21.
  - a.) Unless specifically so stated to the contrary the use of a manufacturer's name or style number is not restrictive, and is intended solely as an identification of the type and quality of the materials and services required. In all cases, the words "or approved equal" if not inserted are implied.
  - b.) An item equal to that named or described in the specifications may upon written approval of the City be furnished by the Contractor. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased; (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.
  - c.) The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, prior to purchase, use or fabrication of such items. Subject to the provisions of M.G.L. Ch. 30, Sec. 39J, approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Contractor's expense.
  - d.) For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes in the work as shown. All directions, specifications and recommendations by manufacturers for the installation, handling, storing, adjustment, and operation of their equipment shall be complied with and responsibility for proper performance shall continue to rest with the Contractor.

- f.) Except as otherwise provided for by the provisions of M.G.L. Ch. 30, Sec. 39J, the Contractor shall not have any right of appeal from the decision of the City condemning any materials furnished if the Contractor fails to obtain the approval for substitution in accordance with these provisions. If any substitution is more costly, the Contractor shall pay for such costs
22. In addition to other guarantees or warranties required under law or other sections of the specification, the Contractor warrants all materials furnished and labor performed under this Contract to be free from defects or errors in workmanship or installation for a period of one year from the date of Completion of the work, as certified by the Project Manager. The Contractor shall indemnify the City of Newton for the full cost of any damage to the property that may result by reason of such defects or errors and shall indemnify the City of Newton from and against any and all claims, demands, losses, costs, expenses, liabilities and damages, including reasonable attorney's fees and expenses, arising out of or on account of this Contract, including but not limited to claims brought against the City of Newton for alleged infringement of patents based upon any methods of construction or application of upon materials furnished under the Contract.
23. The Contractor shall make no excavation in any public way or utility easement unless at least forty-eight (48) hours, exclusive of Saturdays, Sundays and legal holidays, before the proposed excavation is to be made, he has given notice in writing by registered mail, of the proposed excavation to such Public Utility Companies as supply gas, electricity and telephone service in the City, to such private companies as supply cable television service in the City and also to the City of Newton Water Department. Such notice shall set forth the name of the street and a reasonably accurate description of the location in which the excavation is to be made. The Contractor shall comply with the Dig Safe Law (G.L. c. 82, Sec. 40).
24. The Contractor shall exercise the greatest of care to ensure that no material being hauled either to or from the site by him or his sub-contractor's, is spilled onto any way, public or private, within the City limits. In the event that such spillage does occur, it shall be the Contractors' responsibility to remove the spilled material and clean the area by the end of the work day. If in the judgment of the Engineer, the Contractor has not satisfactorily cleaned the area of any spill, the Engineer may then order the area to be cleaned by the City at the Contractors' expense.
25. No cement or bituminous concrete shall be poured from October 30 to April 15, unless the Contractor receives prior written authority to do so from the Commissioner of Public Works.
26. By submitting a bid Contractor represents and warrants that it has the capability to perform in a year 2000 compliant manner. For the purpose of this paragraph "year 2000 compliant" means that Contractor will continue to perform in accordance with all requirements of this Agreement from, into and between the twentieth and twenty-first centuries, without delay or interruption in performance or delivery of services relating to the ability of systems used by the Contractor, or by parties upon whom the Contractor relies in the performance of this Agreement, to accurately interpret, convert, or process date/time data in electronic format.

END OF SECTION

**ITEM 1 – MOBILIZATION (INCLUDING SURVEY SERVICES, PRE-CONSTRUCTION DOCUMENTATION, PRIVATE LAND OWNER NEGOTIATIONS, TRENCH PERMIT ADMINISTRATION & UTILITY COMPANY COORDINATION)****Description**

- a) The Contractor shall employ a Massachusetts Registered Land Surveyor who shall be responsible for providing, and directing, all layout and investigative services throughout the entire course of the project, except for the staking of the easement itself, which shall be completed by the City of Newton. Maintenance and the relocation of said stakes once set by the City of Newton shall be the responsibility of the Contractor.
- b) The Contractor is to make a video tape and/or photographic record of all existing conditions prior to the commencement of construction activities, and/or as may be required as the construction activities commence. This task shall be complete with a representative from the Engineering Division. It is the contractor's responsibility to ensure that this task is inclusive of any and all land both public and private which may be disturbed during the construction process.
- c) The Contractor is to coordinate with private landowners and make accommodations for all activities to be performed on private property during the execution of this contract. Further he is to coordinate, arrange and/or make accommodations for the performance of all second party work which may be required in order to complete the work required under this contract. This shall also be applicable to both public and private land.
- d) The Contractor is responsible for the scheduling and coordinating all Police services under this item, however the actual cost of Police Services will be paid for under **Item 37**.
- e) The contractor shall be responsible for all utility company coordination required to timely schedule the applicable utility to complete the work required to adjust castings which are owned by said utility.
- f) Under this item the Contractor will be required to attend informational meetings, typically one for the general public when deemed necessary, and several with the City of Newton administration in order to discuss and subsequently address all points of concern, including but not limited to a Pre-construction Conference and Progress Conference(s) and inspection site walks with a member of the Engineering Division.
- g) Under this item the Contractor is responsible for submitting and/or processing, in a timely manner, all paperwork associated with the execution of this contract, as well as providing and distributing fliers and notifications to abutters and other concerned parties as the project commences and progresses.
- h) Under this item the Contractor shall comply with all special procedural and/or other site specific directives as stipulated on the plan(s) to ensure a structured and efficient execution of this contract. In addition, and from time to time, the Contractor shall also be required to accommodate and comply with other special requests so that the needs of the general public, abutters, and/or other City of Newton agencies are addressed swiftly and appropriately.**

Description (cont.)

i) Under this item the Contractor shall comply with all Federal, State and City of Newton laws and/or ordinances.

Method of Compliance

j) **Under this item the Contractor shall file a Trench Permit application** ( pursuant to M.G.L. Chapter 82A:1 and 520 CMR 7.00 et seq. (as amended) and in accordance with the 'Summary of 1926 Subpart P-OSHA Excavation Standard), and he shall not commence with any excavation work until such time as the Trench Permit has been approved and he is fully prepared to meet the conditions of the Permit. To that end :

- The Trench Permit and related information is attached - **ATTACHMENT A** - Trench Permit.
- The City of Newton shall waive the fees associated with the issuance of the Permit.
- The Contractor shall not be required to obtain additional insurance but still must list the policy number(s) under which the contractual work is being performed.
- **The Contractor must create, continually update and continually submit a signed and dated amended form, which lists the exact location of each independent trench opening and its purpose, as the project commences. These updated lists shall be restricted to only the work being performed under this contract.**

k) Prior to the commencement of on-site construction activities, the Contractor shall coordinate with the appropriate private landowners as to what activities will be occurring on private land and how the landowners will be compensated for such activities.

l) The Contractor is to make a video tape and/or photographic record of all existing conditions prior to the commencement of construction activities, or as otherwise may become necessary as the construction activities commence. The purpose of this documentation shall be to resolve all points of concern or interest specifically related to the restoration measures required under this contract. This video / photographic record shall be made by the Contractor and a copy, or a secondary video tape, shall be delivered to the Engineering Division. Further, the completion of this activity shall be witnessed by a representative from the Engineering Division.

m) The Contractor may opt to make a photographic record in lieu of a videotape but only to supplement the pre-construction video survey, and only when a photographic record is deemed necessary and sufficient by the Engineer and/or the Contractor.

n) Videos and/or photographs are to be taken and delivered to the Engineer in such a manner that the subject matter can be clearly seen, and in such a timely manner that the collected information is not lost. The video shall be made on foot via a hand-carried camera

o) Under the direction of a Massachusetts Professional Land Surveyor (PLS) the Contractor shall extract, correlate, and subsequently post the design grades shown on the plan and/or as otherwise shown on the associated contract drawings. It shall also be the responsibility of the Contractor to supply and utilize a laser guidance system for laying out the pipes and ensuring the design grades are met.

p) The Contractor shall coordinate the grading and layout activities with the Engineer to ensure that the design grades are posted in an expeditious and acceptable manner. To that end the Contractor shall supply and install, at all critical grade points identified on the plan (and/or profile), as many sturdy pins and/or stakes as he deems necessary, or as otherwise may be required by the Engineer. The pins and/or stakes, once set, shall be clearly marked with paint and flagging such that their physical location, as well as the posted grades, can be easily seen by the general public and by the field personnel. Subsequently, once the pins and/or stakes have served their purpose, they shall be immediately removed by the Contractor.

**Method of Compliance (cont.)**

q) The Contractor is to give ample notice prior to performing certain extraordinary construction related activities on private lands (i.e walls, steps etc.), and/or is to discuss, and/or is to make safe and reasonable accommodation of access, for all private property abutters affected by the scheduled construction activities at hand. In certain cases the Contractor will be further required to make special accommodations for the handicapped or for other physically challenged or sensor impaired individuals who live in or about the construction area so that their needs may be appropriately addressed. Notice of intent to construct or to disturb private property and/or access routes shall be made at least twenty four (24) hours in advance of the scheduled activity and/or as directed by the Engineer.

r) This notification shall be made in writing on a format acceptable to the Engineer should the Contractor be directed to do so, with said notices being posted at the subject address in a location nearest to the regular mail delivery location but not in the actual mailbox. The decision to post notices will be at the discretion of the Engineer in the field. Said notices shall be made on a brightly colored (yellow, orange etc.) 8.5" x 11" pieces of paper.

s) The Contractor shall make contact with all applicable utility companies in advance of commencement of work such that the utility companies can be logically scheduled within the overall construction schedule so that they will be on-site after the level courses of pavement have been laid. During any time in utility company crews will be occupying the site, the Contractor is not to be completing work. The intent of this order is to maintain vehicular access to the road to the largest extent practicable.

**Basis of Payment**

t) The contract **lump sum** price under **Item 1** shall constitute full payment for all materials, labor, equipment and all incidental items required to complete the work described above and/or as shown on the plans, for the entire duration of the project, to the satisfaction of the Engineer. Any devices which are lost, stolen, destroyed, or deemed unacceptable while their use is required on the project shall be replaced without additional compensation.

**ITEM 2 – FURNISH & MOUNT SAFETY SIGNS (INCLUDING POSTS)****Description**

- a) Seven days prior to the commencement of work the Contractor shall establish safety and specialty signboards with posts, as directed by the Engineer, and/or as described on **page 66 of the City of Newton “General Construction Details Revised Through March 2003”** and/or as shown on the plans and/or as otherwise may be required. However, the Contractor is not to order any signboards until he has coordinated this effort with the Engineer in order to identify the maximum number, and various types of signboards that should be contained in the initial sign making order as every new signboard, once delivered, is to be reused. The Contractor is to order new signboards as the Engineer may further direct as the construction activities progress, however, no payment will be made for any new signboards which are damaged or lost. Damaged or lost signs are to be replaced at the Contractors own expense.
- b) Signboards and posts are to be the first mobilization element to be established throughout the project zone before any other construction activities take place.
- c) Specialty signboards, bearing unique messages, shall be fabricated by special order of the Engineer to address any and all site specific informational requirements.
- d) Once established, all signboards and/or post systems are to be maintained for the duration of the construction activities. Any damaged signboards and/or post systems are to be immediately replaced at the Contractors own expense without any additional compensation.

**Materials**

- e) Plywood signboards panels shall be fabricated from ¾” thick Medium Density Overlaid (MDO) Exterior Type, A-B Plywood, both sides in natural color and the whole conforming with the requirements and tests for the above as set forth in U.S. Products Standards PSI-74 for Construction and Industrial Plywood. All plywood shall bear the grade trademark of an approved testing agency. The entire area of the signs shall be reflectorized with the reflective sheeting conforming to Section M9.30.0 of the Commonwealth of Massachusetts, Standard Specification for Highway and Bridges, dated 1988. All applicable portions of Sections 828 and 840 of the aforementioned specifications shall also apply.
- f) Posts shall be constructed of sturdy material(s) and adequately installed so as to withstand seventy-five mile an hour sustained winds when the respective sign is mounted in place. No payment will be made for posts, and/or support systems, which do not clearly meet this criteria. No additional payment will be made to replace any damaged post systems.

**Method of Construction**

- g) All signboards shall be fastened in the manner described in the Construction Details, and/or as shown on the plans, or as directed by the Engineer.

**Method of Construction (cont.)**

- h) The Contractor shall be responsible for maintaining all signboards and posts for the duration of the contract and all signs and/or posts damaged or lost during construction shall be replaced by the Contractor at his own expense. Upon completion of the Contract, all safety and specialty signboards shall become the property of the City of Newton. Ultimately, signboards shall be delivered by the Contractor to a City location, designated by the Engineer, where the Contractor is to neatly stockpile the signboards (exclusive of the posts).
- i) The City reserves the right to limit the number of signs it receives, and to further pick and choose which signs are to be delivered to the City of Newton. In the event the City has no desire to take control of the signs, then the Contractor is to dispose of them as he so chooses, however, in no case is any sign to be discarded in this manner until such time as the Engineer authorizes its release.

**Method of Measurement**

- j) Under **Item 2**, measurement for the payment of signboards with posts shall be by the **square foot** of surface area for each new and professionally made signboard. No additional payment will be made for field made signboards which are ordered by the Engineer and which bear a temporary hand-written message.

**Basis of Payment**

- k) Under **Item 2** the Contractor will be paid the contract unit price **per square foot** for each new professionally made safety and specialty signboard authorized and/or approved by the Engineer, complete in place, inclusive of the post system(s).
- l) Under this item signboards are to be furnished, complete in place, which unit price shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under this item, as shown on the plans, as directed by the Engineer and as specified herein.
- m) **No additional payment will be made for signs and/or signposts which, subsequently replace previously established units.**



**ITEM 3 – SAFETY CONTROLS & DEVICES FOR CONSTRUCTION OPERATIONS****Description**

a) Work under this Item consists of providing, positioning, repositioning and maintaining various traffic control devices, inclusive of the Type 'RC' or 'D' drum devices, for the guiding and safety of the traveling public, and for the safety of the working personnel during construction and maintenance operations, and includes channelizing, barricades, detouring and other warning devices, as directed by the Engineer, and/or as requested by the Police Detail Officer, and/or as shown on the plans.

b) Under this item the Contractor is solely responsible for all safety aspects of the Contract subject to the Provisions of **Article 14** of the General Conditions of the Contract.

**Materials**

c) Drums shall be Type IV reflectorized in their entire white and orange areas with reflective sheeting. Barricades along with non-metallic reflectorized drums shall conform to Section M9 of the Mass. DPW Standard Specifications for Highways and Bridges. Newly developed products providing equivalent target value and stability that are acceptable to the Engineer may be used. All barricades and drums shall be maintained in a satisfactory manner, including the removal of dirt or road film that causes a reduction in sign reflective efficiency.

d) Each barricade and drum used for warning or channelizing at night shall be equipped with a flashing light. All devices that are not lighted at dusk shall be repaired or replaced at no additional charge to the City of Newton.

e) Materials required under this section need not be new, but must be in first class condition and acceptable to the Engineer. Any materials, that in the judgement of the Engineer, are unsatisfactory in appearance and/or performance, shall be removed and immediately replaced by acceptable units. However, the Contractor is solely responsible to monitor and verify the conditions of the materials, and to take immediate action to remedy any deficiencies otherwise brought to his attention.

f) Signs for Type 'RC' and 'D' devices are to comply with all applicable provisions of **Item 2** of the special provisions.

g) All warning and directional devices shall be subject to removal, replacement and/or repositioning as often as is necessary. Deployment of such devices shall be the sole responsibility of the Contractor, therefore ample number of devices must be maintained at all times and at no time is vehicular or pedestrian traffic be a cause for concern.

h) The Contractor is to work closely with the Safety Officer of their insurance agent to determine, and establish, on an ongoing systematic basis, as the construction operations progress, the number of reflectorized devices that are needed in order to eliminate any and all potential safety hazards to the general public.

i) Cones of non-reflectorized warning devices shall not be left in operating position when the day's operations have ceased.



*Method of Construction*

j) Further, all signs mounted on Type 'RC' and 'D' type devices are to be turned away from traffic at days end when no longer in use.

*Basis of Payment*

k) The contract **lump sum** price under **Item 3** shall constitute full payment for all materials, labor and equipment required or incidental to the work described above and/or as shown on the plans. Any devices which are lost, stolen, destroyed, or deemed unacceptable while their use is required on the project shall be replaced without additional compensation.

**l) Signboards for Type 'RC' and Type 'D' drum devices will be paid under Item 2.**

**ITEM 4 – MANUFACTURED CATCHBASIN SEDIMENTATION PROTECTION****Description**

a) **Under this item the Contractor shall install sedimentation protection in all catchbasins in the project area in accordance with the detail as shown on the plans and/or as directed by the Engineer.** The sedimentation protection shall be strategically installed along the roadway such that any soil contaminated run-off generated by the Contractor's operations are captured in the sedimentation protection. To that end the sedimentation protection shall be continuously moved forward of the work as the work progresses and shall not be removed from any catchbasin until such time as all potential run-off for the immediate workzone is deemed to be reasonably free of silt contamination by the Conservation Commission and/or the Engineer.

**Materials**

b) **The sedimentation protection shall be a factory manufactured unit** that is specifically designed as a catchbasin sedimentation containment device, and it shall be provided with integrally equipped fabric lugs through which shall pass #8 (eight) steel reinforcing bar such that, upon the removal of the catchbasin grate, the sedimentation protection shall neither fall into the catchbasin structure nor shall it allow its contents to prematurely empty into the catchbasin unit.

c) The steel rebars shall be cut and fitted to the sedimentation protection in such a way that they pose no projection hazards. In addition, the steel bars shall be reasonably free of any sharp edges.

d) In the event the sedimentation protection is installed where there is a curb opening then the Contractor shall also equip the sedimentation protection unit with a foam filler to prevent any sedimentation from bypassing the silt sack.

**Method of Construction**

e) The placement of new sedimentation protection shall be at the discretion of the Engineer.

f) The Contractor shall not commence with any trenching operations until such time as the sedimentation protections have been installed in every catchbasin that lies downstream from his workzone and has the potential of intercepting the run-off from the workzone.

g) Once the sedimentation protections have been fitted to the catchbasins, the Contractor shall replace the catchbasin grate in such a way that it lies flush with the top of the catchbasin frame. Whenever this cannot be achieved, or whenever a potential tripping hazard exists then the Contractor shall place a safety device at that location.

h) The Contractor shall be diligent in keeping the sedimentation protection measures clean and he shall remove all excessive silt either by his own volition or as he is otherwise directed to do so by the Engineer.

**Method of Measurement**

- i) The Contractor shall continue to move the sedimentation protection measures forward of the work as the Engineer either directs and/or allows or the Contractor shall otherwise install supplemental sedimentation protection measures as the case(s) may necessitate.
- j) When the sedimentation protection devices are emptied it shall be done in a responsible fashion so that the captured silt may be immediately discarded at a legal off site location.
- k) Double catchbasins shall be provided with dual sedimentation protection control measures.
- l) Measurements taken for payment of shall be **for each new sedimentation protection measure** that is initially provided by the Contractor. **To that end the Contractor will be required to subsequently remove, empty and move the sedimentation protection measure to a new location without further compensation.**

**Basis of Payment**

- m) Under **Item 4** the Contractor will be paid the contract unit price **for each catchbasin sedimentation control measure** that is initially provided by the Contractor under the direction of the Engineer. **To that end the Contractor will be required to subsequently remove, empty and then move the used sedimentation control measure to a new location without further compensation,** which unit price shall include full compensation for all labor, materials, tools, equipment and all incidental work necessary to complete the work under this item, as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 5a – CRITICALLY SILENCED SEWER BY-PASS SYSTEM (INCLUSIVE OF PUMP, CRITICALLY SILENCED ENCLOSURE, PIPES, FITTINGS AND RAMPS) @ OAKDALE ROAD****ITEM 5b – CRITICALLY SILENCED SEWER BY-PASS SYSTEM (INCLUSIVE OF PUMP, CRITICALLY SILENCED ENCLOSURE, PIPES, FITTINGS AND RAMPS) @ FARINA ROAD****Description**

- a) Under this item, the Contractor is to furnish and install a critically silenced sewer bypass pumping system. The system shall include, but is not limited to, a pump furnished inside a critically silenced enclosure, all the required pipes and fittings and all necessary ramps over the bypass pipe. Under this item the Contractor is to furnish and install all the required elements of the system, as well as establish and maintain the entire system over the entire duration of the project.
- b) The system shall run 24 hours a day throughout the entire duration of the project, and shall be capable of conveying 100% of the daily sewer flow through the repair area, and shall be leak free for the entire duration of its deployment. It is the responsibility of the Contractor to ensure that this directive is met at all times, 24 hours a day, 7 days a week.
- c) It shall be the Contractors responsibility to determine the size, type and number of pump(s) required, as well as the size, type and layout of the bypass pipe system itself. The Contractor must ensure that 100% sewer flow is maintained 24 hours a day, 7 days a week, for the entire duration of the project.
- d) It shall be the Contractors responsibility to notify all residents in the project area regarding how the proposed work under this Contract will effect them and their property. He shall make any necessary arrangements with the private property owners as required. All notifications shall be delivered to the residents on an 8.5"x11" piece of company letterhead, and shall fully explain the scope and impact of the project as well as provide an emergency telephone number for their use. **Such notification shall be paid for under Item 1.**
- e) In the event that any of the elements of the system fail, the Contractor shall immediately repair the defective element of the system to the satisfaction of the Engineer. The Contractor shall provide the City of Newton with an emergency phone number on which he can be reached 24 hours a day, 7 days a week in the event an emergency repair to the system is required. Such repairs to the system shall be made at no additional cost to the City of Newton.
- f) The Contractor shall check the pump twice daily, 7 days a week, inclusive of weekends and holidays, and shall pay special attention to the pumping system on days of inclement weather.

**Materials**

- g) **The pump itself is to be a critically silenced unit, fully contained within a sound dampening enclosure mounted on wheels so that that contractor may have the ability to move the unit throughout the job site as requested by the Engineer. The pump itself shall utilize modern technology in the area of sound reduction, including but not limited to a critically silenced enclosure which is capable of reducing sound levels to a maximum of 75 decibels at a distance of 30 feet.**

### Materials (continued)

- h)** The bypass pipe itself shall be a high quality material capable of withstanding H-20 loading as well as sudden impact from traffic related incidents. In addition the pipe and all associated fittings shall be capable of withstanding the maximum pressure that may potentially be imposed on the pipes by the pump system.
- i) Once established, the bypass pipe itself shall be leak free at all connection points and shall convey 100% of the daily sewer flow as required by the City of Newton. The pipe shall not move by the normal forces it shall encounter on a daily basis, but in the event the Engineer requests the system be reconfigured, the Contractor shall have the ability to disassemble and reassemble the entire bypass system and its associated pipe network.
- j) At all crossing points, the bypass pipe shall be ramped to safely allow for the crossing of all motor vehicles and pedestrian traffic, which, may cross over the bypass pipe. In all locations where the pipe crosses a sidewalk or other location where pedestrians shall be crossing the pipe by foot or by wheelchair, the ramp shall not exceed 5% and shall be accessible according to the AAB regulations for handicap access. In addition, all pedestrian crossings shall be clearly marked with orange spray paint.
- k) The type of ramps and materials of which they are to be constructed of is to be determined by the Contractor, but in all cases they shall not impede vehicular or pedestrian access in any way. Upon completion of work under this Contract, the Contractor shall remove all ramps and there shall be no permanent blemishes on either the roadway or sidewalk area caused by the process of installing or removing the ramps or by the materials of which they are constructed. Such damage shall be repaired by the Contractor at no additional cost to the City of Newton, to the satisfaction of the Engineer.

### Method of Construction

- l) Prior to beginning the actual sewer pipe installation, the Contractor shall ensure the sewer bypass system is fully established and is functioning properly. The Contractor shall be responsible for ensuring the system continues to function properly 24 hours a day and 7 days a week until the project is complete.
- m) Prior to system activation, the upstream sewer manhole outlet shall be plugged such that no sewer flow shall exit the sewer manhole and that 100% of the sewer flow is conveyed through the bypass system itself. Upon completion of the project, the Contractor shall remove this plug and the process of both establishing and removing the plug shall cause no damage to the sewer manhole or any associated appurtenances.
- n) The bypass system shall begin at the nearest upstream manhole and shall convey the sewer flow to a downstream sewer manhole.
- o) The inlet side of the temporary bypass pipe shall be installed in the upstream sewer manhole at the elevation manhole invert. The pipe shall be secured in place in a removable fashion, which, upon removal shall not cause damage to the sewer manhole. The discharge end of the bypass pipe shall be installed inside the downstream manhole such that the bypass pipe ejects the sewerage at the elevation of the invert of the outlet pipe in the downstream direction.
- p) The pump itself shall be setup at a strategic location so as not to impede upon pedestrian traffic, vehicular traffic, emergency access or the like and shall be protected from vehicles with approved safety devices according to Item 2 of the Special Provisions.** In the event the Engineer requests that the pump be relocated for any reason, the Contractor shall reestablish the entire by-pass system to accommodate the new pump location, to the satisfaction of the Engineer.

**Basis of Payment**

q) Under **Item 5a and Item 5b** the Contractor will be paid the contract **lump sum** price for establishing the sewer bypass system according the Contract Special Provisions, the associated Contract Drawings and the direction of the Engineer. The lump sum price shall include full compensation for all labor, materials, tools, equipment and all incidental work necessary to complete the work described under this items, as shown on the plans and as directed by the Engineer, inclusive but not limited to the critically silenced pump and enclosure, all required pipes and fittings, the plugging of the upstream manhole, all required ramps and the by-pass pipe itself.



**ITEM 6 – SAWCUT BITUMINOUS CONCRETE ROADWAY****Description**

- a) Under **Item 6** the Contractor shall make every reasonable effort to mark out the location of the existing sewer main and associated branch lines, water main, water services, drain pipes and all other utilities in the project area. Subsequent to this effort the Contractor shall then lay out the lines along which the roadway pavement shall be cut, and such lines shall not be cut until they have been reviewed by the Engineer.
- b) **Only water cooled self-propelled self-contained power driven saws shall be used to cut the roadway. No wheel cutters or similar devices are to be used in this operation.** Water shall be provided by the Contractor who shall coordinate such activities and metering with the City of Newton Utilities Division.
- c) Water required for completion of work under this Item shall be supplied by the Contractor, at his own expense. His supply of water shall also be sufficient to wash off all residual saw cutting material from the pavement surface. If the contractor does not possess a portable water supply capable of meeting these requirements, he is to obtain a meter and back-flow prevention device from the Utilities Department of the City of Newton for use while tapping a fire hydrant as a water supply. A deposit is required for use of City of Newton equipment and such activities are to be coordinated with the Utilities Department directly.

**Method of Construction**

- d) The Contractor shall make an investigation of the site and shall retrieve any additional information, which he deems necessary in order to accurately locate all utility lines of interest in the project area. Subsequent to this action he is to layout a series of parallel offset stringlines which will best preserve the structural integrity of the existing roadway and/or will best preserves the aesthetic appearance of the roadway pavement once it is patched. The parallel offset lines shall be initially made in keel or chalk and shall not be painted until such time as the Engineer has had time to review the width of the proposed trench as well as the overall cutting pattern. Upon authorization of the Engineer the Contractor shall string lines upon the roadway surface and shall overspray the stringlines with a latex based paint to create an accurate series of lines along which the saw shall be ultimately placed. The overspraying of the stringline shall be done in a neat and reserved fashion so as not to obliterate the ‘shadow’ of the stringline and/or to be otherwise cause an unsightly blemish on the overall roadway system.
- e) Any additional research, preparation, and/or subsequent adjustments to the parallel lines, as well as any additional supplemental sawcutting operation, which must necessarily take place after the construction work has actually begun, shall be borne by the Contractor at his own expense. **The City of Newton cannot guarantee the exact location of any City of Newton Sewer main, Sewer House connection, water main, branch line and/or water service.** Therefore it may be prudent for the Contractor to coordinate his sawcutting activities as the work commences in order to best project the work forward and to minimize the sawcutting operation.
- f) Parallel lines shall be evenly offset to either side of the existing sewer main and sewer house connections.
- g) The self-propelled water cooled saw shall not make and/or produce excessive noise or dust in this operation. The Engineers decision in these matters will be final.

**Method of Construction (Continued)**

h) Water shall be provided by the Contractor for these operations and no sawcutting shall be allowed when the prevailing air temperature is forty (40) degrees and falling. The Contractor is to make all arrangements with the City of Newton Water Division for the installation of a temporary and/or portable water meter system, and in all cases the Contractor shall install a gate valve at the source point of the flexible hose connection which can be easily closed should the flexible hose fail. **In the event freezing temperatures are encountered, or are otherwise expected before the water and residue has dissipated, then the Contractor shall treat the roadway and/or sidewalk surface(s) with sand and/or chemicals to render the surface ice and snow free.**

i) The flexible water line feeding the saw unit shall be manufactured from heavy duty materials to resist failure from traffic abrasion. Further, any flexible line shall be leak free and shall be well marked so as not to impede vehicular and/or pedestrian safety.

j) **The kerf of the saw blade shall extend completely through the entire pavement** so that when the pavement material is removed there is no tearing of that portion of the roadway which is to remain. However, in the case of cement concrete roadways the Contractor is to sawcut only to the top of the existing reinforcing bars so that ample steel is preserved to which the new steel reinforcement can be subsequently tied.

k) In those cases where obstructions disallow the saw to cut completely through to the end of the run then the Contractor shall use pneumatic hammers to complete the cut.

**Method of Measurement**

l) The Contractor will be paid the contract **lump sum** price for the entire project sawcutting operation. The Engineer shall make percentage payments as he deems appropriate during the course of these operations.

**Basis of Payment**

m) Under **Item 6** the Contractor will be paid the **lump sum** price for all labor and materials which will be required to complete these tasks throughout the entire term of the project, inclusive of water, which unit price shall include full compensation for all labor, materials, tools and equipment, and all incidentals necessary to complete the work under this item, as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 7 – GENERAL EXCAVATION & DISPOSAL OF EXCAVATED MATERIALS (INCLUSIVE OF EXISTING SEWER PIPES)****Description**

a) General excavation shall consist of the work required for the **excavation and immediate disposal** of all excess and/or undesirable materials **over the entire limits of the project, which work shall include, but is not limited to:**

- Waste materials associated with the removal of the existing sewer pipes and sewer house connection pipes regardless of their depth or location, inclusive of 6" of material below the existing sewer pipes.
- **The sewer and sewer house connection pipes themselves.**
- Existing grass turf, pavement and/or other material(s) excavated from the trench to accommodate the proposed bedding materials, and the proposed SDR-35 P.V.C. sewer pipe.
- Waste material associated with sewer manhole installations.
- Brush, shrubs and trees up to 6" in diameter (inclusive of stump removal) which require excavation and disposal from the site in order to perform the construction operations required to complete work proposed under this contract.
- Peat, mud, pipes, fences, sidewalks, slopes, trenches (excluding rock/ledge removal), excess material generated by roadway apertures, the removal and disposal of all excess and/or undesirable materials whatever their nature may be, the removal and disposal of brush, trees under six (6) inches in diameter, boulders less than one-half (1/2) cubic yard in volume, existing pavements, and anything else that must be removed and disposed of in order to complete the work under this contract and/or as directed by the Engineer.
- Personal waste generated by the Construction crews.
- Waste material generated from the digging of test holes.

b) **The only case in which the Contractor may receive additional compensation for excavation and disposal of excavated materials shall be for work completed under Items 7, 8 and 9 of this Contract. Prior to completing work under those items, the Contractor shall seek approval from the Engineer to do so, otherwise, the Contractor will not be compensated for work completed under those items.**

**Method of Measurement**

c) The Engineer shall make percentage payments as he deems appropriate during the course of these activities.

**Basis of Payment**

d) Under **Item 7** the Contractor will be paid the contract **lump sum** price for the general excavation and immediate disposal of all excess and/or undesirable material(s) generated throughout the entire course the project, which unit price shall include full compensation for all labor, materials, tools, equipment, and all incidental work necessary to complete the work under this item as shown on the plans or construction details, as directed by the Engineer, and as specified herein.

**ITEM 8 – EXPLORATORY EXCAVATION(S)****Description**

a) When in the opinion of the Engineer, or as shown on the plans, it is deemed necessary to excavate a portion of the street to create test pits or investigative access holes, the Contractor shall be paid under **Item 8**.

**Method of Construction**

b) All applicable portions this document pertaining to excavation, backfilling and/or compaction requirements shall apply.

c) No backfill is to contain any type of pavement material.

**d) If, in the opinion of the Engineer, the excavated material (excluding pavement material) is deemed unsuitable as a backfill material then the disposal of excavated material shall be paid under this item and subsequently replaced with material as specified and paid for under Item 11, 12, 13 or Item 14, whichever is applicable.**

**Method of Measurement**

e) Measurements taken for payment of exploratory excavation shall be by the **cubic yard**, and shall be to such depths, and to such widths as approved by the Engineer or are otherwise defined by the payment lines as shown on the plans or construction details. No payment for extra excavation beyond these limits shall be made.

**Basis of Payment**

f) Under **Item 8** the Contractor will be paid the contract unit price **per cubic yard** for exploratory excavation, the disposal of all undesirable material(s) and all incidental work necessary to remove and subsequently backfill the trench opening with the original trench material (except that no pavement material shall be used), which unit price shall include full compensation for all labor, materials, tools, equipment, as complete the work under this item as shown on the plans or construction details, as directed by the Engineer, and as specified herein.

g) If required by the Engineer, material needed to refill the exploratory excavations shall be paid under **Item 11, 12, 13 or Item 14** whichever is applicable.

**ITEM 9 – EXTRA DEPTH EXCAVATION IN TRENCHES****Description**

- a) When, in the opinion of the Engineer, the material encountered at the bottom of the excavation is unstable or unfit material on which to build the pipe line or structure, the Contractor shall excavate to such greater depths as the Engineer may decide. Such extra excavation shall apply to all material to be excavated regardless of their nature, **except rock excavation** and shall be disposed of under this Item.
- b) **It shall be the responsibility of the Contractor to have the trench in question inspected by the Engineer prior to completing work under this Item. Failure to coordinate and agree upon the depth of the extra depth excavation shall result in non-payment for work completed under this Item.**
- c) **Work under this Item does not include compensation for excavation to standard depths as described in this project manual and shown on the contract documents (ie to a depth of 6” below the existing sewer pipes). Such excavation shall be paid for under Item 6.**
- d) The excavated material shall be replaced with material as specified and paid for under **Item 11, 12, 13 or Item 14**, whichever is applicable.

**Method of Construction**

- e) The excavations are to be opened in as many places and in such lengths of section as the Engineer shall direct, and the work carried on in each place by a separate gang, consisting of as many men as he shall require. The Contractor shall make all excavations of sufficient widths to provide ample space for the construction of the pipelines and manholes for bracing, sheathing, trench boxes, and the removal of ground water, and shall render the bottom of the excavation firm and dry and acceptable in all respects. The trench at the bottom shall be excavated only to widths sufficient to provide working space on each side of the pipe for laying, making tight joints and compacting the backfill around the pipes. Trench widths shall conform to the excavation sections shown on the plans or construction details.
- f) The Contractor shall sheath and brace the sides of the excavations sufficient for proper support and prevent any movement that could cause injury to the work, adjacent property, utilities and structures.

**Method of Measurement**

- g) Measurements taken for payment of extra depth excavation shall be by the cubic yard, and shall be to such depths and widths as approved by the Engineer, and to such widths as are defined by the payment lines shown on the plans or Construction Details. No payment for extra excavation beyond these limits shall be made.

**Basis of Payment**

- h) Under **Item 9** the Contractor will be paid the contract unit price **per cubic yard** of extra depth excavation only and the disposal of all undesirable material(s), which unit price shall include full compensation for all labor, materials, tools, equipment and all incidental work necessary to complete the work under this item, as shown on the plans or Construction Details, as directed by the Engineer and as specified herein.
- i) The material needed to refill the trench shall be paid under **Item 11, 12, 13 or Item 14** whichever is applicable.

**ITEM 10 – ROCK EXCAVATION IN TRENCHES****Description**

- a) Under **Item 10** the Contractor shall do all the rock excavation necessary to complete the work called for in this contract as shown on the plans, as directed by the Engineer, and as specified herein.
- b) No soft, loose or broken rock, impacted boulders, or hard pan, but only such solid rock as may be approved by the Engineer in advance as requiring use of a ram hoe for removal shall be considered as rock excavation. **Boulders one-half (1/2) cubic yard or more in volume shall be included in this item.**

**Method of Construction**

- c) **The contractor shall be limited to the use of a ram hoe while completing work under this item. No blasting shall be allowed.**
- d) The Contractor shall take every precaution to protect all utility structures, adjacent buildings, pedestrians and vehicles from harm. Any damage caused by these operations shall be repaired by the Contractor at his own expense, therefore the Contractor must contact all utility authorities to determine the age and potential for damage to the outlying structures.
- e) The excavated material shall be replaced with material as specified and paid for under **Item 11, 12, 13 or Item 14**, whichever is applicable.

**Method of Measurement**

- f) Measurements taken for payment shall be taken by the cubic yard. **Trench rock excavation shall be based upon very specific depth and sidewall limits conforming to the payment lines shown in the City of Newton General Construction Details or as otherwise specified herein.**

**Basis of Payment**

- g) Under **Item 10** the Contractor will be paid the contract unit price per **cubic yard** for rock excavation in trenches, which unit prices shall be full compensation for all labor, tools, equipment and all incidental work necessary to complete the work under these items as shown on the plans, as directed by the Engineer and as specified herein
- h) The material needed to refill the trench shall be paid under Item 11, 12, 13 or Item 14, whichever is applicable.**



**ITEM 11 – GRAVEL FURNISHED FROM OUTSIDE THE SITE (FOR TRENCH REFILL)****Description**

- a) Under **Item 11** gravel shall be furnished, placed and used for refilling extra excavation in trenches, or used as backfill for trenches. It shall also include refilling extra excavation in the roadway to sub-base grade.
- b) This item shall only apply when, in the opinion of the Engineer, the material encountered in the excavation is unstable or unfit material for use as backfill material. All cases in which the existing excavated material is suitable for use as backfill material, the Contractor shall re-use such material.
- c) If the Contractor has a question as to the suitability of excavated material for use as backfill material, the Contractor shall immediately contact the Engineer and request a decision. Failure to coordinate with the Engineer regarding this matter shall constitute in non-payment for work completed under this Item.

**Material**

- d) Gravel shall be clean gravel not found in the excavation, but furnished by the Contractor from outside the limits of the site.
- e) All gravel shall be run of the bank gravel containing no stone larger than three (3) inches in diameter and shall be free from roots, or other foreign matter, but having a binding quality that will compact to a ninety-five (95) per cent compaction requirement.

**Method of Construction**

- f) **All applicable portions of these special provisions pertaining to excavation, backfilling and/or compaction requirements, shall apply.**

**Method of Measurement**

- g) Measurement taken for **Item 11** shall be by **the ton** for reasonably dry material as delivered to the site. The Contractor shall furnish the Engineer with receipts from the plant showing the weight of each load of gravel which is furnished and placed, however the Engineer reserves the right to adjust payment in the event the volume of material is either not entirely used, and/or the material is excessively wet and/or the shipment has arrived on the site already partially used.

**Basis of Payment**

- h) Under **Item 11** the Contractor will be paid the contract unit price **per ton** for furnishing and placing gravel from outside the site for trench refill, which unit price shall include full compensation for all labor, materials, tools and equipment and all incidental work necessary to complete the work under this item, as shown on the plans, as directed by the Engineer, and as specified herein.

**ITEM 12 - GRAVEL FURNISHED FROM OUTSIDE THE SITE (FOR ROADWAY FILL)****ITEM 13 - FURNISH & PLACE DENSE GRADED CRUSHED STONE****Description**

- a) Except for the gravel included as work to be done under other items, or used for the backfilling of trenches, all gravel used to complete the work called for in this contract shall be furnished and placed under these items, **Item 12** and **Item 13**, or as directed by the Engineer.
- b) The depths of dense graded crushed stone and gravel in the roadway base course for various depths of bituminous concrete pavements are as follows: Four (4) inches of dense graded crushed stone over six (6) inches of gravel for two and one-half (2-1/2) inch pavements, four (4) inches of dense graded crushed stone over eight (8) inches of gravel for four (4) inch pavements, and six (6) inches of dense graded crushed stone over the undisturbed sub-grade for five and one-half (5-1/2) inch pavements, or as directed by the Engineer.

**Materials**

- c) All gravel shall be run of the bank gravel containing no stone larger than three (3") inches in diameter and shall be free from roots, or other foreign matter, but having a binding quality that will compact to a ninety-five (95) per cent compaction requirement. Dense graded crushed stone shall conform to Division III, Materials, subsection M2.01.7 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highway and Bridges, dated 1988. All gravel and dense graded crushed stone shall be subject to the approval of the Engineer. All subsequent references to gravel in this section shall also apply to dense graded crushed stone.

**Method of Construction**

- d) The gravel shall be spread from self-spreading vehicles, or with power graders of approved types or by hand upon the prepared sub-base. Care shall be taken while spreading the gravel to rake forward and distribute the largest stone, so that they will be at the bottom of the gravel course and be evenly distributed.
- e) The gravel so placed shall be thoroughly rolled true to the lines and grades, as directed, with a self-propelled three (3) wheeled roller or tandem roller weighing not less than twelve (12) tons until it presents a firm, stable and unyielding surface, and until it ceases to creep under the wheels of the roller. Any depressions that appear during or after rolling shall be filled with gravel and re-rolled until the surface is true and even.
- f) Any area that is inaccessible to mobile mechanical equipment or in restricted areas shall be compacted with pneumatic rammers or powered hand tampers.
- g) Compaction shall be carried on until the density of the material is not less than ninety-five (95) per cent of the Standard Proctor Density as determined by Standard Laboratory Compaction Test. The Contractor shall arrange and pay for and submit to the Engineer results of such tests taken in such number as to indicate a test of every eight hundred (800) square feet of compacted area.
- h) The gravel base course shall be fine graded and rolled to a true grade, the prescribed number of inches in depth, and parallel to the finished grade of the roadway. The Contractor shall, when the Engineer orders to do so, place iron pins or stakes along the centerline, and both gutter lines or wherever he may decide, and mark the necessary grades thereon. The Contractor shall supply all the labor and material necessary.

Method of Measurement

i) Measurement taken for **Item 12** or **Item 13** shall be by **the ton** for reasonably dry material as delivered to the site. The Contractor shall furnish the Engineer with receipts from the plant showing the weight of each load of either gravel or dense graded material which is furnished and placed, however the Engineer reserves the right to adjust payment in the event the volume of material is either not entirely used, and/or the material is excessively wet and/or the shipment has arrived on the site already partially used.

Basis of Payment

j) Under **Item 12** the Contractor will be paid the contract unit price **per ton** for furnishing and placing gravel, which unit price shall include full compensation for all labor, materials, tools and equipment, and all incidentals necessary to complete the work under this item as shown on the plans, as directed by the Engineer and as specified herein.

k) Under **Item 13** the Contractor will be paid the contract unit price **per ton** for furnishing and placing dense graded crushed stone, which unit price shall include full compensation for all labor, materials, tools and equipment, and all incidentals necessary to complete the work under this item as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 14 – FURNISH & PLACE ¾” CRUSHED STONE (MAX STONE SIZE ¾”)****Description**

a) The work to be done under this item consists of furnishing and placing ¾” crushed stone for refilling extra excavation(s), for bedding and surrounding sewer pipes, and when ordered by the Engineer or for any other end use as the Engineer may direct.

**Materials**

b) Crushed stone shall consist of clean, hard, tough, durable ledge rock, free from soft, thin, elongated, friable or laminated pieces, disintegrated stone, vegetable or other deleterious matter, and shall have a percentage of wear as determined by the Los Angeles Abrasion Test (A.A.S.H.T.O. Standard Method T96-49) of not more than thirty-five (35) per cent. The stone shall be thoroughly screened and the resulting material shall have a maximum stone size of (¾) inch and shall be uniformly graded in size and quality, angular and free from rounded surfaces.

**Method of Measurement**

c) Measurement taken for **Item 14** shall be by **the ton** for reasonably dry material as delivered to the site. The Contractor shall furnish the Engineer with receipts from the plant showing the weight of each load of fractured stone material which is furnished and placed, however the Engineer reserves the right to adjust payment in the event the volume of material is either not entirely used, and/or the material is excessively wet and/or the shipment has arrived on the site already partially used.

d) Limits and payment lines have been established and are shown on the General Construction Details or are otherwise may be superceded by the site specific details as shown on the contract drawings. No payment for crushed stone or screened gravel furnished and placed beyond these limits will be paid for unless specifically authorized by the Engineer.

**Basis of Payment**

e) Under **Item 14** the Contractor will be paid the contract unit price **per ton** for crushed stone complete in place. The unit price shall include full compensation **for all excavation and disposal of existing material**, and for all labor, tools, equipment, and all incidental work necessary to complete the work under this item as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 15 – CLASS B CEMENT CONCRETE FOR ENCASEMENT****Description**

a) Class B transit mixed cement concrete shall be furnished and placed for encasement and for supporting and reinforcing the pipe at various points as required by the Engineer.

**Material**

b) Cement shall be air entrained and shall conform to the requirements of A.A.S.H.T.O., Designation M134-48, Type Ia to IIa.

c) Sand shall be composed of clean, hard durable and impermeable particles resistant to wear and frost, and free from injurious amounts of organic matter, loam, clay, salts, mica and weak grains.

d) Coarse aggregate may be either gravel stone or crushed stone.

e) Water shall be clean, clear and free from deleterious amounts of oil, acid, alkali, salts and organic matter.

f) Class B cement concrete shall contain a minimum of five hundred (500) pounds of cement per cubic yard of concrete, and shall have a minimum compressive strength of fifteen hundred (1500) pounds at seven (7) days and twenty-five hundred (2500) pounds at twenty-eight (28) days.

**Method of Construction**

g) Concrete shall be so placed as to prevent aggregation. To this end, chutes, hopper, etc., shall be employed. The concrete shall not be dropped from excessive heights. Forms shall be employed, if so directed by the Engineer.

h) Concrete shall be placed between the solid ground which is to be properly squared off to maximize the bearing area and to minimize the shear factor, and the fitting or special to be anchored, and the area of bearing on the pipe and on the grounds shall be as shown, or as directed by the Engineer.

**Method of Measurement**

i) The volume of cement concrete to be paid for under this item will be measured by the cubic yard complete in place.

**Basis of Payment**

j) Under **Item 15** the Contractor will be paid the contract unit price **per cubic yard** for Class B cement concrete, complete in place, which unit price shall include full compensation for all labor, materials, tools, equipment and all incidentals necessary to complete the work as shown on the plans, as directed by the Engineer, and as specified herein.

**ITEM 16 – DUST CONTROL (CHEMICAL TREATMENT)****Description**

a) The Contractor is responsible for all safety aspects associated with the application of the Calcium Chloride which shall be furnished and applied for dust control purposes to the surface of the subgrade, or elsewhere as directed in accordance with these specifications.

**Materials**

b) Calcium Chloride shall conform to the requirements of A.A.S.H.T.O. – M144, Type I or Type II.

**Method of Construction**

c) Calcium Chloride shall be uniformly applied at the rate of one and one-half (1-1/2) pounds per square yard, or at any other minimal rate which does not jeopardize the safety of the travel way yet serves to control the dust condition(s). Calcium Chloride is to be evenly spread to prevent concentrated areas of Calcium Chloride from occurring.

d) Chemicals are to be strategically applied so as not to track onto adjoining roadways. The Contractor is advised to scrutinize each area on a case by case basis, and apply the chemicals in such a manner that the wheels of the vehicular traffic do not deposit any residual chemicals onto the pavement of any adjoining roadways.

**Method of Measurement**

e) Calcium Chloride will be measured by the pound and the quantity to be paid for shall be the actual weight of such material furnished and applied, complete in place.

**Basis of Payment**

f) Under **Item 16** the Contractor will be paid the contract unit price **per pound** for Calcium Chloride for dust control, complete in place, which unit price shall be full compensation for all labor, materials, tools, equipment, and all incidental work necessary to complete the work under this item as shown on the plans, as directed by the Engineer, and as specified herein.

g) Daily sweeping operations for the purpose of controlling dust is a general requirement of the project.



**ITEM 17 – FURNISH AND INSTALL WOVEN POLYPROPYLENE GEOTEXTILE FABRIC****Description**

- a) Under this item the contractor is to furnish and install woven polypropylene geotextile fabric as shown on the plans and as specified herein.
- b) The fabric shall be delivered on site in a roll measuring no less than the overall width of the trench plus 6" side wall return on both sides.

**Materials**

- c) **The woven polypropylene geotextile fabric is to be Mirafi 600-X or an approved equal. (For approved equal criteria see paragraph f of this Item) and shall arrive on site in a roll that measures no less than the width of the trench plus twice the side-wall return.**
- d) The fabric is to be new and unused and is to be delivered to the site in the original factory packaging.
- e) Fabric is to conform to the following minimum standards and criteria:
- AASHTO M288-96 Specifications for Stabilization and Separation, Class 1.
  - Grab tensile strength conforming ASTM D-4632 @ 315 pounds
  - Grab Tensile Elongation ASTM D-4632 with a Machine Direction/Cross Machine Direction (MD/CD) ratio equal to 15/10.
  - Trapezoid Tear Strength ASTM D-4533 @ 120 pounds.
  - Mullen Burst Strength ASTM D-3786 @ 600 psi.
  - Puncture Strength ASTM D-4833 @ 120m pounds.
  - Ultra-Violet Resistance after 500 Hours ASTM D-4355 @ 70% Strength.
  - Apparent Opening Size ASTM D-4751 @ 40 US Sieve
  - Permittivity ASTM D-4491 .05 sec -1
- f) **"Equality" - An item equal to that named or described in the specifications of the contract may be furnished by the Vendor and the naming of any commercial name, trademark or other identification shall not be construed to exclude any item or manufacturer not mentioned by name or as limiting competition but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the work being contracted for or the material being purchased; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications. The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, at time of bid, use or fabrication of such items. Subject to the provisions of M.G.L., Ch. 30, Sec. 39J, approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Vendor's expense.**

**Materials (cont.)**

g) All directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment and operation of their material shall be complied with; responsibility for proper performance shall rest with the Contractor.

**Method of Construction**

h) The fabric material is to be carefully handled to prevent sagging and to prevent any undue stresses from occurring in the fabric prior to its installation.

i) The fabric is to be unrolled in the direction parallel to the proposed sewer pipes to be installed under this contract and shall be placed directly onto of the prepared subbase material. The contractor is to wrap the fabric up around the walls of the trench so that upon placement of the 6" of bank run gravel, the gravel is surround by fabric on the bottom and sidewalls of the trench. Excess fabric material shall be trimmed without causing tearing or stress of any kind to the fabric.

j) Where overlaps are required, they shall measure a minimum of one and a half (1.5') and the separate pieces of fabric shall be attached to each other in a manner that ensures the function of the entire fabric system as one continuous support system. The Contractor shall investigate and adhere to manufacture specification for guidance on how to secure the overlapping pieces of fabric to each other.

**Method of Measurement**

k) Measurement taken for payment shall be by the **square yard** of fabric installed (**Overlapping is not considered in the overall payment measurement**).

**Basis of Payment**

l) Under **Item 17** the Contractor will be paid the contract unit price per **square yard** for furnishing and installing the woven polypropylene geotextile fabric, complete in place, which unit price shall include full compensation for all labor, materials, tools, equipment, and all incidentals necessary to complete the work under this item in accordance with the plans, as directed by the Engineer and as specified herein.

- ITEM 18a – FURNISH AND INSTALL 8” SDR-35 PVC SEWER PIPE (AT FRANCIS STREET)**  
**ITEM 18b – FURNISH AND INSTALL 10” SDR-35 PVC SEWER PIPE (AT FARINA ROAD)**  
**ITEM 18C – FURNISH AND INSTALL 10” SDR-35 PVC SEWER PIPE (AT OAKDALE ROAD)**  
**ITEM 19 – FURNISH AND INSTALL 6” SDR- 35 PVC SEWER PIPE (HOUSE CONNECTIONS)**

**Description**

a) The Contractor shall furnish, trench and lay, complete in place 6-inch, 8-inch or 10-inch SDR-35 PVC sewer pipe, of the type shown on the plans, as directed by the Engineer and as specified herein. The use of pipe lasers is required in the installation of all sewer mains to control both the gradient and the alignment of the proposed sewer system. The use of conventional auto-levels and related equipment is required in the installation of all sewer house connections to control both the gradient and the alignment of the proposed service system.

b) Unless otherwise covered under separate and specific items the furnishing, trenching and laying of the PVC sewer pipes **shall include all excavation (excepting rock excavation or unsuitable excavation), disposal of any excess material(s), and for the backfilling for pipes and manholes to the grades shown on the plans.** All such excavation (excepting rock excavation) shall be unclassified and shall include all material to be excavated regardless of what the nature of the material may be. Furnishing, trenching and laying items shall include the removal of trees, shrubs, plants, roots, etc., and the refilling of the trench and removal and disposition of surplus material. These items shall include the furnishing, placing and removal of all sheathing not left in place, all bridging and fencing and the removal of the same unless otherwise required by the Engineer, all pumping, bailing, dewatering the water table if necessary to lay the pipe on a dry firm bedding, or otherwise disposing of water through underdrains or otherwise; the furnishing and placing of all temporary underdrains used by the Contractor for the disposal of water; the proper handling of all sewage, storm water or flow in existing adjacent sewers, surface drains, underdrains, water mains and service pipes or other conduits or upon the surface of streets or lands; the building and the removal of all temporary pipe lines and bulkheads; the removal and replacing of such portions of existing structures as may be necessary to make proper connections with the new work; the removal, where necessary, of pipes, conduits, sewers, underdrains, drains, manholes, catch-basins, and similar existing structures, together with their contents, and including stonework, woodwork, ironwork, cemented stone, brick masonry, interior bracing, foundations and piling; all protection and restoration of buildings, walls, fences, water mains and service pipes and other existing structures; the restoration and resurfacing of the trenches (unless specifically covered under other items), accommodation, protection and restoration of travel, and all other incidental work inclusive of providing final as-built ties and plans.

c) The following abbreviations may be used in these Specifications:

AASHTO	-The American Association of State Highway & Transportation Officials
ACI	-American Concrete Institute
ANSI	-American National Standards Institute
ASCE	-American Society of Civil Engineers
ASTM	-American Society of Testing Materials
AWS	-American Welding Society
AWWA	-American Water Works Society
FED.SPEC.	-Federal Specifications
DIPRA	-Ductile Iron Pipe Research Association
NEWWA	-New England Water Works Association

**Description (Continued)**

- d) Where reference is made to a specification by one of the above mentioned or other associations, it is understood that the latest revisions thereof shall apply.
- e) In case of conflict, this specification shall take precedence over the above noted specifications.

**Materials**

- f) The SDR-35 Polyvinyl Chloride (PVC) pipe and pipe fittings shall conform to ASTM D-3034, SDR 35, with integral wall, bell and spigot joints. The pipe shall be colored green for in-ground identification as sewer pipe.
- g) The SDR-35 PVC pipe shall be made of PVC resin compound conforming to ASTM D-1784. The locked in rubber sealing gasket shall conform to ASTM D-3212 - "Joints for Drain and Sewer Pipes using flexible elastomeric seals" and ASTM F-477. Spigot ends of the pipe shall be supplied from the factory with bevels. The majority of the pipe shall be furnished in standard 13-foot lengths, but enough random lengths may be provided to allow for connection to manholes and the installation of service laterals. Each end of random length of pipe shall be furnished in lengths of not less than two (2) feet unless otherwise approved by the Engineer.
- h) The SDR-35 PVC pipe fittings and accessories shall be as manufactured and furnished by the pipe supplier, and shall conform to ASTM D-1784, and shall have bell and/or spigot configuration compatible with that of the pipe. Wyes, tees, bends, caps and adapters, and any other fittings required shall be provided.
- i) Pipe shall be marked along the outside of the barrel in bold style type and shall indicate the manufacturer's name, pipe size, PVC compound used, and the ASTM material specifications for the PVC compound used; i.e. ASTM D-1784.
- j) The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density and other physical properties.
- k) No substitution for the materials specified shall be allowed unless the substituted materials are shown to be equal in all respects to the materials specified.
- l) All materials shall conform to these specifications and to such further specifications as shown on the plans.

**Method of Construction**

- m) When ordering pipe and fittings, the Contractor shall make arrangements with the supplier to furnish the services of a qualified instructor representing the manufacturer. At the start of pipe-laying operations, the instructor shall spend as much time on the work as may be necessary instructing the Contractor's men in the correct methods of handling, cutting, laying, and jointing the pipe. Thereafter, all such work shall be done in accordance with the recommendations of the manufacturer and the instructor.
- n) Upon delivery, all pipe and fittings shall be subject to thorough inspection and tests by the Engineer, the right being reserved for him to apply such of the tests specified as he may deem necessary from time to time. The Contractor shall furnish all labor necessary to assist the Engineer in inspecting the pipe and fittings. All necessary tests shall be at the Contractor's expense.

Method of Construction (Continued)

- o) Care shall be taken in handling and laying pipe to avoid damage to the PVC gravity sewer pipe. Any pipe which, before or after installation, is cracked or which has received a severe blow which might have caused an incipient fracture, shall be marked as rejected and removed at once from the work, even though no such fracture can be seen and the Engineers decision shall be final.
- p) Immediately before being installed, each length of pipe shall be visually inspected.
- q) The excavations are to be opened in as many places and in such lengths of section as the Engineer shall direct, and the work carried on in each place by a separate gang consisting of as many men as he shall require. The Contractor will make all excavations of sufficient widths to provide ample space for the construction of the pipe lines and manholes, for bracing, sheeting, and the removal of ground water, and shall render the bottom shall be excavated only to widths sufficient to provide working space on each side of the pipe for laying, making tight joints, and compacting the backfill around the pipes. Trench widths shall conform to the excavation sections shown on the plans or construction details.
- r) The Contractor shall sheet and brace the sides of the excavations sufficient for proper support and prevent any movement that could cause injury to the work and to adjacent property, utilities and structures.
- s) Excavation, bedding, bridging, and backfill shall conform to the applicable sections shown on the construction details and/or as shown on the plans.
- t) Pipes shall only be laid with the Engineer in attendance, and are to be evenly bedded on the specially prepared bed(s) as shown on the plans or as otherwise directed. All pipe shall be “laid in the dry”, and all joints shall be made watertight. Pipe with factory-fabricated joints shall be laid in accordance with the manufacturer’s recommendations and instructions.
- u) Pipe and fittings shall be laid with to conform to the lines and grades indicated on the drawings or as directed.
- v) **New sewer mains shall be laid with the aid of a laser**, whereas the gradients of the sewer house connections are to be controlled and set by conventional auto-level and rod procedures, and each pipe and fitting shall be laid so as to form a close joint with the previously laid pipe or fitting and bring the inverts continuously to the required grade.
- w) The Contractor’s attention is directed to the fact that PVC Gravity Sewer Pipe is a “flexible conduit”. The pipe shall be installed in strict accordance with ASTM Designation D-2321 “Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe” and/or in the manner as shown on the plans. If sheeting or a trench box is used, they shall not be placed below the spring line of the pipe without the approval of the Engineer. When this sheeting or trench box is removed, extreme care shall be taken so as not to disturb the previously constructed pipe bedding, haunching, and the initial backfill.
- x) The pipe shall be placed proceeding in an upstream direction, bell end upstream to avoid slippage and facilitate grade control, unless otherwise directed by the Engineer.
- y) When PVC pipe must be cut it shall be cut square by means of fine-tooth handsaw and a miter box according to the manufacturer’s recommendations. Roller-type cutters shall not be used. All cut ends shall be examined for possible cracks caused by cuttings. Cracked pieces shall be marked as rejected and removed at once from the work.

Method of Construction (Continued)

- z) The pipe ends shall be beveled using a pilot beveling tool, a “cheese grater” type of hand tool, or a disc-sander with medium coarse paper. The field bevel must match the manufacturer’s factory bevel specifications.
- aa) Suitable bell holes shall be made or left so that only the barrel of the pipe is subjected to bearing pressure from the supporting material. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object, but shall be brought to the exact correct grade by adjustment of the supporting material. When the pipe has been properly bedded, enough of the cradle and backfill material shall be in place and compacted between the pipe and the sides of the trench to hold the sewer in correct alignment. Concrete blocks or saddles, bricks, or large stones shall not be used to hold the pipe in alignment.
- bb) No pipe shall be laid in water or when, in the opinion of the Engineer, trench conditions are unsuitable. Under no conditions shall the sewer laterals be utilized to drain water from excavations during the construction of any sewer system appurtenance.
- cc) PVC gravity sewer pipe shall be jointed in strict accordance with the recommendations of the manufacturer and his installation instructor. All pipe ends shall be wiped with a clean, dry cloth around the entire circumference from the end to one inch beyond the reference mark. The spigot end is to be lubricated using lubricant supplied by the pipe manufacturer.
- dd) The Contractor shall furnish all necessary gages to verify the correct positioning of the pipe bell, spigot and gaskets.
- ee) No pipe shall be covered with water, screened gravel, concrete or backfill until the joints have been inspected and approved.
- ff) The Contractor shall build a tight bulkhead in the pipeline where new work enters an existing sewer. This bulkhead shall remain in place until its removal is authorized or ordered.
- gg) Sewer house connections are to be installed as shown on the plans, and/or as field conditions necessitate.
- hh) Where the invert of the sewer is less than ten (10) feet below the surface of the ground, eight (8) inch or ten (10) inch by six (6) inch PVC wyes and 45° elbows shall be inserted in the main line as shown on the plans. Where the invert of the sewer is greater than ten (10) feet below the surface of the ground, chimneys shall be built. Open end of the pipe and branches shall be closed with airtight stoppers or caps secured in place in a approved manner.
- ii) Where complete sewer services are to be installed, connection to the existing pipe at the house shall be made with a suitable adapter as approved by the Engineer
- jj) Where house services are to be terminated at property lines a 6-inch nipple no less than six (6) inches nor more than two (2) feet in length shall be installed with a airtight cap.
- kk) Except as may be necessary in placing and tamping the backfill, no walking on or working over the pipe will be permitted until the trench has been backfilled to a depth of one (1) foot above the top of the pipe.



Method of Construction( Continued)

ll) At all times, care shall be taken to prevent earth, water, and other materials from entering the pipes through open ends, branches, or manhole openings. When work at an opening is suspended, the opening shall be closed with a airtight stopper or other suitable closure until the resumption of work.

mm) In backfilling the Contractor shall use great care in the selection and placing of the fill around the pipe. **The fill around the pipe shall be crushed stone** and then subsequently selected earth materials which are to be free from frozen lumps. The fill around the pipes shall be placed by hand shovel and thoroughly compacted with suitable pneumatic rammers or powered hand tampers as fast as placed, up to a level of twelve (12) inches above the top of the pipe or as otherwise directed by the Engineer. The remainder of the trench shall be filled and compacted by mechanical equipment sufficient to ensure against subsequent settlement. In backfilling trenches with rock fragments, enough earth shall be used in conjunction with the rock to fill the voids and shall be tamped in place to the satisfaction of the Engineer. No heavy stones or large masses of earth, as from a power machine, shall be dropped into the trench in such a manner as to endanger the pipe. The materials used for backfilling in street trenches, for a depth of one (1) foot above the top of the pipe, shall be selected portions of the excavated materials free of fractured rock larger than three (3) inches in diameter, and shall be, where possible, strictly of gravel. However, if directed, the entire material for filling shall consist of gravel.

nn) The sewer system is to be watertight, and **if within one (1) year after completion**, leaks have developed, they shall be repaired at the expense of the Contractor and to the satisfaction of the Engineer.

oo) The Contractor must perform leakage tests using an approved low air pressure testing system.

pp) All leakage testing shall be done under the direct supervision of the Engineer, and all test criteria shall be approved by the Engineer. Any pipe which fails the leakage test shall be replaced by the Contractor at his own expense.

qq) Upon completion of the work, the Contractor shall thoroughly clean and flush the pipe lines, and all pipe liens shall be subjected to a mirror inspection by the Contractor and the Engineer jointly. Any pipe showing settlement after laying or which is not in true alignment shall be taken up and re-laid by the Contractor without additional compensation.

rr) The Contractor is to take as-built location ties as the work progresses and is to provide a final as-built plan of the entire sewer system upon completion of the project. Ties are to be taken to all pipe junctures, pipe termination points, manholes, angle points, or to any other sewer system and/or other utility fixture which the Engineer deems necessary in order to establish an accurate permanent record of important points of information. Ties are to be delivered to the Engineer as often as he may call for them in order to preserve their safe-keeping. Ties are also to be taken under the direct supervision of the Engineer, and in a manner, and on a format, acceptable to him. Further, the final as-built plan is to contain invert elevations for all installed manholes, invert elevations at the termination point of all sewer house connection stubs, as well as a final alignment plan. The final as-built plan is to be provided to the Engineer in a manner, and on a format, acceptable to him.

**Method of Measurement**

ss) Measurement for payment under **Item 18a, Item 18b and Item 18c** shall be the horizontal distance measured by the linear foot along the pipe in place, and the distance shall run from the center of manhole to center of manhole. Where the pipe terminates in structures other than manholes, the distance shall be taken to the inside wall face of the structure.

tt) Measurement for payment for **Item 19** shall be the horizontal distance measured by the linear foot along the pipe in place, and the distance (for non-chimney type sewer house connections) shall run from the center of the main to the termination point of the six (6) inch stub. In those cases where a vertical rise (i.e. chimney section) is installed, the measurement for the vertical section shall be additionally included and shall be taken from the center of the main to the height of its run.

**Basis of Payment**

uu) Under **Item 18a, Item 18b, Item 18c and Item 19** the Contractor will be paid the contact unit price **per linear foot** of eight (8) inch or ten (10) inch SDR-35 PVC sewer main pipe and six (6) inch SDR-35 PVC sewer house connection pipe, of the type shown on the plans and as specified herein, complete in place, **which unit price shall include full compensation for all excavation and the disposal of all unclassified material**, and for all labor, materials, tools and equipment and all incidental work, necessary to complete the work under these items as shown on the plans, as directed by the Engineer and as specified herein, inclusive of as-built ties and plans.

**ITEM 20a - FURNISH & INSTALL 8" x 6" SDR 35 PVC TEE WYE FOR SERVICE CONNECTION**

**ITEM 20b - FURNISH & INSTALL 10" x 6" SDR 35 PVC TEE WYE FOR SERVICE CONNECTION**

**ITEM 21 - FURNISH & INSTALL 6" x 6" 45° SDR 35 PVC BEND FOR SERVICE CONNECTION**

**ITEM 22 - FURNISH & INSTALL 6" x 6" 90° SDR 35 PVC SWEEP FOR SERVICE CONNECTION**

**ITEM 23 - FURNISH & INSTALL 6" AIRTIGHT SDR-35 PVC PLUG FOR SERVICE CONNECTION**

**Description**

a) Under **Item 20a, Item 20b, Item 21, Item 22 and Item 23** the Contractor shall furnish and install, complete in place, 8" or 10" x 6" SDR-35 PVC tee wyes, 6" x 6" SDR 35 PVC 45 degree bends, 6" x 6" SDR 35 PVC 90 degree sweeps, 6" SDR-35 PVC airtight plugs, and wooden markers at all sewer house connection junctures and termination points as shown on the plans and/or as directed by the Engineer.

**b) DESCRIPTION OF WORK UNDER THIS ITEM SHALL COMPLY TO THE DESCRIPTION SECTION OF ITEM(S) 18a, 18b, 18c AND ITEM 19.**

**Materials**

c) MATERIALS FOR USE WHILE COMPLETING WORK UNDER THESE ITEMS SHALL CONFORM TO THE MATERIALS SECTION OF ITEM(S) **18a, 18b, 18c AND ITEM 19.**

d) Oak markers shall be two (2) inch by two (2) inch stock painted a high fluorescent orange. However, the Contractor may substitute pressure treated lumber materials, of a size and type acceptable to the Engineer.

**Method of Construction**

**e) THE METHOD OF CONSTRUCTION OF WORK UNDER THESE ITEMS SHALL CONFORM TO THE METHOD OF CONSTRUCTION OF WORK UNDER ITEM(S) 18a, 18b, 18c AND ITEM 19.**

f) Oak markers shall be set directly at the termination point of all pipes and/or at all critical points of interest as directed by the Engineer, as shown on the plans and as specified herein.

**Method of Measurement**

g) Measurement for **Item 20a, Item 20b, Item 21, Item 22 and Item 23** will be for each wye, bend, sweep and/or plug furnished and installed as shown on the plans and as specified herein.

**Basis of Payment**

h) Under **Item 20a, Item 20b, Item 21, Item 22 and Item 23** the Contractor will be paid the contract unit price for **each** fitting and/or plug, complete in place, which unit price **shall include full compensation for all excavation and the disposal of all surplus and undesirable material**, and for all labor, materials, tools, equipment and all incidental work necessary to complete the work under these items and as shown on the plans, and/or as directed by the Engineer, and as specified herein, inclusive of maintaining and providing as built ties and plans, and for the installation of wooden markers.

**ITEM 24 – CORE A HOLE IN AN EXISTING MANHOLE****Description**

- a) Under this item the Contractor shall employ a manufactured coring device to create apertures in the side of new or existing manholes as the necessity for such an opening arises, either by plan, or as the situation may otherwise warrant. **This item is not for creating any holes in new precast sewer manholes which, by plan, can be ordered from the manufacturer with the flexible connectors cast in place. This item is only for coring holes as field conditions may necessitate.**
- b) Apertures shall be made at the discretion of the Engineer.
- c) **The Contractor must assume that not all apertures can be made on the same day.**

**Method of Construction**

- d) The coring of manhole openings for the placement and fitment of pipes shall be by an acceptable electric and/or hydraulically powered coring tool that is manufactured expressly for the purpose of creating round apertures, and each hole is to be of a size and dimension that will readily accept the appropriately sized flexible connector (boot), and will also further accommodate the hydraulic cement bonding agent which will be used to seal the flexible connector to the structure. Such openings, when initially cored, shall be smooth sided and shall have been made in such a way that the structural integrity of the manhole wall, in which it was made, has not been adversely affected.

**Method of Measurement**

- e) Measurement for **Item 24** will be for each round aperture made in those locations as shown on the plans or as otherwise directed by the Engineer.

**Basis of Payment**

- f) Under **Item 24** the Contractor will be paid the contract unit price for **each** cored hole, complete in place, which unit prices shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under these items, as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 25 – FURNISH AND INSTALL PRECAST CEMENT CONCRETE SEWER MANHOLES  
(EXCLUDING COST OF CASTINGS)****Description**

a) Standard precast cement concrete sewer manholes and special sewer manholes shall be built where shown on the plans and where directed by the Engineer.

**Material**

b) Precast Class A cement concrete manholes shall conform to the following criteria:

- Concrete strength  $f_c$  4,000 PSI @ 28 days. Density 150 PCF.
- Cement shall be Portland Type I or III per ASTM C150-81.
- Admixtures, air & plasticizers per ASTM C150-81
- Reinforcing shall be per ASTM A615 for wire fabric.
- Design loading per AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.
- Construction joints are to be sealed with compressible butyl asphalt gasket material to render fully watertight connections.
- The weight of the structure shall be approximately 875 pounds per vertical foot.
- Bases of the manholes shall be of the extended type having a non-settling flanged foot.
- Steps shall be co-polymer Polypropylene Plastic with a core of ½" Grade 60 steel reinforcement.
- All pipe access apertures shall be provided with a flexible connector which shall be integrally cast into the structure, and which shall be provided with a stainless steel clamp in order to render an airtight and watertight connection.

c) Precast cement concrete manholes shall comply with the details shown on the plans, or as otherwise shown in the City of Newton General Construction Details.

d) All brick used in the construction of the invert, or under the frame and cover, or in the repair and/or restoration of existing sewer manholes, shall be the best quality clay sewer brick, of the class known as "Hard Sewer Brick", burned hard entirely through; shall be straight-edged, of compact texture, and regular and uniform in size and shape. Bricks shall be free from stones and pebbles, and free from cracks, checks or fractures extending into the body of the brick in such a manner as to effect their serviceability or strength. Bricks shall have a compressive strength of not less than four thousand (4000) pounds per square inch when tested (on edge) in accordance with the A.S.T.M. Specifications, Serial Designation: C32-24. They may be rejected if they absorb water to the extent of more than twelve (12) per cent of their dry weight after being dried and then immersed in water, in accordance with A.S.T.M. Specifications, Serial Designation: C32-24. Bricks shall be not less than two and one-quarter (2 1/4) by three and three quarters (3 3/4) by eight (8) inches nor more than two and one-half (2 1/2) by four (4) by eight and one-half (8 1/2) inches in size and shall be of rectangular cross-section. They shall have a smooth plane surface on two ends and at least one edge. When struck together, or when struck with a trowel, they shall give a clear ringing sound. Bricks may be rejected upon visual inspection by the Engineer if, in his opinion, they do not comply with these specifications as to size, shape and freedom from visible defects.

**Material (Continued)**

- e) Cement shall be air entrained and shall conform to the requirements of A.S.S.H.T.O. Designation M134-48, Type IA to IIA.
- f) Sand shall be composed of clean, hard, durable and impermeable particles resistant to wear and frost and free from injurious amounts of organic matter, loam, clay, salts, mica and weak grains.
- g) Coarse aggregate may be either gravel stone or crushed stone.
- h) Water shall be clean, clear and free from deleterious amounts of oil, acid, alkali, salts and organic matter.
- i) Class A concrete shall contain a minimum of five hundred sixty (565) pounds of cement per cubic yard of concrete and shall have a minimum compressive strength of two thousand four hundred (2400) pounds at seven (7) days and four thousand (4000) pounds at twenty-eight (28) days.
- j) Mortar shall consist of cement and sand mixed in the proportions, by volume, of one (1) part cement and two (2) parts of sand which shall be clean, sharp, and shall have a gradation common to type known as "Brick Sand." Lime shall not be used.

**Method of Construction**

- k) Standard sewer manholes and special sewer manholes shall be built in the locations, to the dimensions, details and specifications shown on the plans or the construction details, and/or as directed by the Engineer.
- l) The bottom slab of the manholes may be of brick or of Class A concrete, inverts and water tables shall be of brick masonry, the barrels of the manholes shall be precast extended base type reinforced Class A concrete with an integrally cast floor.

**Method of Measurement**

- m) **Measurements taken for payment shall be taken by the vertical foot as measured from the finished invert of the manhole to a point one (1) foot below the grade of the finished rim of the manhole.**

**Basis of Payment**

- n) Under **Item 25** the Contractor will be paid the contract unit price for each **vertical foot** of standard sewer manhole, complete in place, including the construction of the table and invert, but exclusive of the frame and cover or drops/"jug handles" if any, which unit prices **shall include full compensation for all excavation and disposal of excess material**, and for all labor, materials, tools, equipment and all incidentals necessary to complete the work under these items as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 26 – FURNISH & INSTALL COVER & FRAME FOR MANHOLE****Description**

a) The Contractor shall furnish and covers and frames for manholes where shown on the plans, as directed by the Engineer and as specified herein.

**Materials**

b) Manhole covers and frames shall comply with the directives and dimensions as shown in the City of Newton General Construction Details **March 2003** and shall be castings of first quality gray iron having an ultimate tensile strength of not less than twenty thousand (20,000) pounds per square inch, to which may be added steel to the amount of twenty (20) per cent and shall be castings of such character and weight as to make sound, strong, tough, durable castings of even grain, free from cracks, scales, lumps, blisters, air or sand holes, or other flaws or defects such as welding, burning in, plugging or excessive shrinkage. All manhole covers and frames shall be machined to insure a good fit and to prevent rocking. Specimen bars shall be furnished for testing purposes if required. The design and construction of all street manhole covers and frames shall be such as to safely insure their ability to support the road traffic, the minimum load being considered as one rear wheel of a 20-ton truck or steam roller transmitting a dead load of seven (7) tons, plus thirty (30) per cent for impact, uniformly distributed on any cover or grating. All covers shall be solid covers of flat design, each provided with the appropriate word “DRAIN”, “SEWER”, “WATER” cast in the cover, and shall have a diameter of twenty-four and three-eighths (24 3/8) inches. Covers and frames shall weigh not less than a total of four hundred and eighty (480) pounds. All castings shall be carefully coated over all surfaces with coal-tar pitch varnish composed of the best quality of coal-tar diluted with sufficient oil to make a smooth, tough, durable, tenacious coating which, when the iron is cold, will not have a tendency to become brittle or scale off. In coating the castings the hot dip process shall be used, the casting and the coating material to be heated to a temperature of three hundred (300) degrees F. and the casting immersed in the vat of coating material for five minutes and then drained of all surplus coating material. All castings used shall meet with the above requirements and be subject to the approval of the Engineer.

**Method of Construction**

c) The frame for manholes shall be brought to proper grade with a minimum of two courses of hard red brick. Both brick and casting shall be set in full mortar beds true to the lines and grades as directed.

d) Brick and mortar shall conform to all applicable portions of **Item 24** of these specifications.

**Basis of Payment**

e) Under **Item 26** the Contractor will be paid the contract unit price furnishing and setting **each manhole cover and frame set**, complete in place, which unit prices shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under these items, as shown on the plans, as shown in the City of Newton General Construction Details, as directed by the Engineer and as specified herein.



**ITEM 27 – SHEATHING LUMBER LEFT IN PLACE****Description**

- a) The Contractor shall furnish, put in place and maintain such sheathing and bracing, etc., of such a size and material, as may be required to support the sides of the excavation and to prevent any movement of earth which could in any way diminish the width of the excavation below that necessary for proper construction, or otherwise injure or delay the work or endanger adjacent structures. If the Engineer is of the opinion that at any points sufficient or proper supports have not been provided, he may order additional supports put in at the expense of the Contractor.
- b) When in the opinion of the Engineer sheathing cannot be removed without impairing the safety of the work, such sheathing shall be left in place on orders from the Engineer.
- c) Sheathing and/or trench boxes used for the Contractor's protection and convenience shall not be included in these items. All sheathing not specifically ordered by the Engineer to be left in place shall be removed or "pulled" and no compensation will be allowed for such work.**

**Material**

- d) Lumber sheathing shall be sound spruce, Douglas fir, or yellow pine and shall be either tongued and grooved or splined. The thickness shall be such as to withstand all subjecting earth pressures.

**Method of Construction**

- e) All sheathing, shoring and bracing shall be of such lengths and dimensions as approved by the Engineer.
- f) The sheathing shall be securely and satisfactorily braced to withstand all pressures to which it may be subjected.
- g) Sheathing shall be driven down or cut off to elevations shown on the plans or as directed by the Engineer.
- h) The responsibility for the exact satisfactory construction and maintenance of sheathing, complete in place, shall rest with the Contractor and any work done which in the performance of incidental construction is not acceptable for the intended purpose shall be either repaired or removed and reconstructed by the Contractor at his expense.

**Method of Measurement/Basis of Payment**

- i) Lumber left in place on orders from the Engineer shall be **measured by the thousand feet board measure** of lumber sheathing.
- j) Measurements for payment under Item 27 shall be taken of the actual sheathing left in place on orders from the Engineer.** Cut-off points shall be at any elevation or points that he may designate and/or as shown in the City of Newton General Construction Details.

**ITEM 28 – PRESSURE & VACUUM TESTING OF SEWER SYSTEM COMPONENTS****Description**

- a) Under this item the Contractor shall have a series of either air or vacuum pressure tests, whichever is applicable, performed on all installed sewer system components.
- b) These tests are to be performed with equipment, and by an individual, approved by the Engineer.

**Testing**

- c) PVC Sewer pipe, inclusive of sewer connection stubs, shall be air tested in the following manner (Reference ASTM C-828-90):
- Plug all openings in test section.
  - Add air until internal pressure of line is raised to five (5) psi, allowing pressure to stabilize for no less than five (5) minutes.
  - Reduce pressure to four and one-half (4.5) psi.
  - If pressure drops more than one half (.5) psi within five (5) minutes, the test fails.
  - In the event of failure the Contractor is to take remedial action after which time the test is to be repeated until satisfactory results are attained.
- d) Sewer manholes shall be vacuum tested in the following manner (Reference ASTM C1244 M93):
- It is recommended that this test be conducted prior to the building of the invert.
  - Place the test head at the top of the sewer manhole per the manufacturers recommendation.
  - Draw a vacuum of five (5) psi (35kpa of mercury). With the valve on the top of the vacuum line of the test head closed, and the vacuum pump shut off, measure the time it takes for the vacuum to drop to four and one half (4.5) psi.
  - If the vacuum drops below four and one-half (4.5) psi within three (3) minutes, the test fails.
  - In the event of failure the Contractor is to take remedial action after which time the test is to be repeated until satisfactory results are attained.

**Basis of Payment**

- e) Under **Item 28** the Contractor will be paid the contract **lump sum** price for the successful pressure and/or vacuum testing of the entire sewer system and all of its components, which lump sum price shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under these items, as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 29 - 2" TEMPORARY BITUMINOUS CONCRETE FOR TRENCH RESURFACING****ITEM 30 - 4" BITUMINOUS CONCRETE FOR INITIAL 'PERMANENT' TRENCH RESURFACING****Description**

- a) When directed by the Engineer, trenches and areas disturbed by the Contractor shall be resurfaced with bituminous concrete Type I-1.
- b) When in the judgement of the Engineer, conditions necessitate the installation of temporary resurfacing of the trench, this work shall be done and paid for under **Item 29. The Contractor is to install temporary resurfacing at the end of every work week or as often as the Engineer may otherwise direct as the conditions may warrant.** Once installed the temporary resurfacing shall be maintained by the Contractor until the permanent resurfacing is installed, and any settlements, or other trench failures shall be repaired to the satisfaction of the Engineer at the Contractor's own expense.
- c) The Contractor shall continually review and maintain all trenches in order to provide safe and unobstructed passage, at all times, for both vehicular and pedestrian traffic. In addition, all trenches and areas that are permanently resurfaced by the **Contractor shall be guaranteed against settlement, upheaval or failure of any kind for a period of one (1) year after the City accepts the work, and he shall replace such resurfacings at his own expense.** The City Engineer shall be sole judge as to what constitutes a failure, and which portion of the resurfacing is to be replaced, and his decision shall be final.
- d) **After the sewer main work has been completed and tentatively accepted by the City of Newton permanent trench resurfacing shall be installed in two courses under Item 30.** However, prior to the installation of the four (4) inch permanent patch the Contractor must be certain that all areas are fully compacted to ninety-five (95) percent density from the bottom of the trench to the top. Further, permanent trench resurfacing operations, once begun, are to be carried out without interruption, and in a systematic and responsible manner.
- e) **To that end the Contractor is to coordinate his activities such that the trench area, at the end of the workday, has been excavated, appropriately filled and compacted with designated base materials, bindered and topped, all in one day, in order to provide a seamless operation and to eliminate any surface unevenness between the existing roadway pavement surface and the new trench patch.**
- f) **Further, all permanent trench patch resurfacing must be installed throughout each independent site and/or project zone before the Contractor will be allowed to start new construction activities elsewhere.**
- g) **Under Item 30 the Contractor shall be responsible for excavating and disposing of all temporary bituminous patch material as well as all excess soil material(s) prior to the placement of the permanent patch. No additional compensations shall be paid to the contractor for excavation or disposal of excavated material(s) while completing work under this item.**

Materials

h) Bituminous concrete shall be Type I-1, mixed and transported as specified in the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, dated 1988, Sections 460 and M3.

Method of Construction

i) When temporary resurfacing is required, no dense graded crushed stone will be placed in the trench. The trench shall be brought to a grade one and one-half (1-1/2) inches to two (2) inches below the existing pavement with gravel thoroughly compacted and subsequently topped with a one and one-half (1-1/2) inch to two (2) inch depth of bituminous concrete. The depth of temporary patch shall be as directed by the Engineer, but in no case shall exceed two (2) inches in depth.

j) The temporary bituminous concrete shall be laid, compacted and finished in accordance with the Engineer's directions, and as often as he shall direct regardless of the quantity.

k) When replacing the temporary resurfacing with permanent resurfacing, the existing edge of the previously sawcut pavement shall not be damaged and sufficient gravel shall be excavated to such depths as to accommodate the prescribed depths of bituminous concrete, gravel and dense graded crushed stone courses as described in **this Item**. **In addition the method of operation for permanent trench patch resurfacing shall comply with all directives of this Item and the City of Newton Standard Construction Details.**

l) Under **Item 30** Type I-1 bituminous concrete for permanent trench resurfacing shall be laid on a gravel and dense graded crushed stone base built under **Item 11, Item 12 or Item 13**. The depth of the four (4") depth permanent bituminous concrete pavement shall be laid in **two courses. The first course shall be two (2) inches of Type I-1 binder, compacted with a vibratory plate compactor having a manufacturers rating plate attached at the factory to confirm the unit is capable of generating a centrifugal force of no less than six thousand (6000) pounds** and such binder material is to be placed upon eight (8) inches of gravel topped with a maximum four (4) inches of dense graded crushed stone, however the depths of the base materials shall *only be installed as pre-approved by the Engineer*. **The second course shall be two (2) inches of Type I-1 top applied in the conventional self-propelled machine laid manner.**

m) The bituminous concrete for full width permanent roadway pavement(s), or the final top applied to the permanent patch trench sections previously bindered, shall be spread with a mechanical spreader of the self powered type having a floating screed assembly controlling the elevation of the strike-off. The screed or strike-off member shall be adjustable to the shape of the cross-section of the finished pavement and shall be of such design as to produce without tearing, shoving or gouging, a finished surface of the evenness and texture desired. The use of road graders, or towed spreaders, shall not be allowed. If, in the opinion of the Engineer, the spreading and finishing equipment is not providing satisfactory results, he shall order the use of such equipment be discontinued and other satisfactory spreading and finishing equipment shall be provided by the Contractor. Hand spreading may be used in places inaccessible to the machine and when permitted by the Engineer. When hand spreading is permitted, the mixture shall be dumped, upon arrival, on approved steel dump sheets outside the area in which it is to be spread and shall then immediately laid to the required depth.

*Method of Construction (Continued)*

- n) The Engineer may at any time order the use of side forms which shall be of a type subject to his approval. The forms shall be set so that the finished pavement shall be at a true line and grade as determined by the Engineer. The Engineer may in lieu of forms order the use of iron pins with grade marked thereon, so placed that they will not interfere with the travel of the machine spreader, but close enough so that a short straight edge placed on the newly laid pavement can reach a string line tied from pin to pin, and afford a visual check on the thickness of the newly laid pavement. The Engineer may order the pins to be used on the base, binder, or top courses. All expenses involved in the use of pins including the furnishing of such iron pins shall be borne by the Contractor.
- o) The bituminous concrete must be kept clean during hauling and handling and covered during transit with canvas or other material which will retain the desired pavement temperature. These mixtures must not be hauled in such a manner that segregation of the ingredients takes place, or that a crust is formed on the surface, or that the mixture will crumble or flatten out when dumped. Trucks which transport the mixture shall be tight, and the side of the bodies shall be coated with a thin film of soap solution. The dispatching of trucks from the distribution point shall be so arranged that all the material which is to be delivered at or on the road surface during any day may be placed and shall have received final compression in a continuous manner in order to minimize cold seaming.
- p) The bituminous concrete mixture shall be delivered to the work in such condition that it is easily workable and can be efficiently laid. The mixture shall be laid only on an approved base course which is dry and only when weather conditions are suitable which shall be decided by the Engineer.
- q) Under **Item 30** permanent bituminous concrete shall only be applied in bright sunlight or partly cloudy weather without the threat of rain. **The Contractor is not to schedule and/or apply any bituminous concrete, whose end use is for permanent installation(s), unless such favorable weather conditions are professionally forecast by a recognized weather agency,** and at the request of the Engineer, this forecast shall be filed with Engineer in hard-copy form. Further, **no bituminous concrete shall be applied upon a residually wet surface, and no bituminous concrete which has been prematurely cooled by rain, either on the roadway or on the truck, will be accepted.**
- r) The temperature of the mixture to be laid shall be between two hundred and twenty-five (225) degrees Fahrenheit and three hundred and twenty-five (325) degrees Fahrenheit and no mixture shall be placed when the air temperature in the shade and away from artificial heat is forty (40) degrees Fahrenheit or less. Variation from these temperatures may be permitted only on written permission of the Engineer.
- s) The edge of the asphalt mixture adjacent to rigid curb lines, around manholes, or other solid fixtures or where no shoulder is constructed, shall be hand tamped before being rolled.
- t) The bituminous concrete shall be laid in the prescribed number of courses as shown on the plans or as determined by the Engineer. All depths of courses shall mean the finished depths after rolling. All courses must be laid so that they will have the required thickness and be parallel to the proposed finished grade of the surface.

*Method of Construction (Continued)*

u) After the paving mixture has been properly spread it shall be thoroughly and uniformly compressed by rolling with power rollers. On projects involving less than one hundred and fifty (150) tons of paving mixture per day one (1) tandem roller of not less than ten (10) tons shall be used. On projects using more than one hundred and fifty (150) tons but less than three hundred and fifty (350) tons two (2) rollers shall be required with one (1) additional roller for each two hundred (200) tons of mixture per day thereafter. A day shall be construed as eight (8) hours working time. If, in the opinion of the Engineer, satisfactory compaction is not obtained by rolling with a tandem roller, the Engineer may order the rolling to be done with ten (10) to twelve (12) ton three (3) wheeled roller with wheels not less than twenty-four (24) inches wide. All rollers used shall weigh at least two hundred and fifty (250) pounds per inch width of tread. Each roller shall be in charge of a competent, experienced roller operator and shall be kept in a nearly continuous operation as practical while the work is under way. Rolling shall be continued and so executed that all roller marks, ridges, porous spots and impressions are eliminated, and the resulting surface has the required grade and contour. Rolling shall proceed at a rate not to exceed two hundred and fifty (250) square yards per hour, per roller. To prevent adhesion of the mixture to the roller the wheels shall be kept properly moistened but excess water or oil will not be permitted. Along forms, curb headers and similar structures and all places not accessible with a roller, the mixture shall be thoroughly compacted by tampers. Such tampers shall weigh not less than twenty-five (25) pounds and shall have a tamping face of not more than fifty (50) square inches. The surface of the mixture after compressing shall be smooth and true to the established crown and grade. Any mixture which becomes loose and broken, mixed with dirt or in any way defective shall be removed and replaced with fresh mixture, which shall be immediately compacted to conform with the surrounding area. Areas of one (1) square foot or more showing an excess of bitumen shall be removed and replaced.

v) The densities of the completed pavement shall be not less than ninety-two (92) percent of the calculated density of a voidless mixture composed of the same materials in like proportions. After final compression, samples will be taken from the completed pavements and when tested by standard laboratory methods shall show compliance with aforesaid density requirement.

w) Placing of the mixture shall be as nearly continuous as possible and the roller shall pass over the unprotected end of the freshly laid mixture only when the laying of the course is to be discontinued for such length of time as would permit the mixture to attain initial stability. In all such cases, including the formation of joints as hereinafter specified, provisions shall be made for proper bond with the new surface for the full specified depth of the courses. Transverse joints shall be formed by cutting back on the previous days run so as to expose the full depth of the course. When the laying of the course is resumed, the exposed edge of the joint shall be painted with a thin coat of hot asphalt cement and the fresh mixture shall be raked against the joint. Hot smoothers or tampers shall be carefully employed in such a manner as to heat the old pavement sufficiently, without burning it, to insure proper bond and then rolled. The work of setting up or making these joints shall be performed by competent workmen who are capable of making a correct, clean and neat joint.

**Method of Construction (Continued)**

- x) The lengths of lanes or strips of bituminous concrete in the base, binder and top courses shall be under control of the Engineer at all times. The Contractor shall lay such lengths as approved by the Engineer and then lay all adjacent strips to the full width of the roadway before being allowed to proceed ahead with other lanes. The practice of laying lanes of bituminous concrete for such lengths that an unduly long period of time elapses before laying adjacent lanes shall not be allowed.
- y) The finished surface shall present an even texture free from blemishes, ridge marks or imperfect spots and it shall be true as to line and grade. When tested with a sixteen (16) foot straight edge placed parallel with the center line of the surface course there shall be no deviation from a true surface in excess of one-quarter (1/4) of an inch. A ten (10) foot straight edge may be used on vertical curves. If any soft or imperfect places or spots develop in the surface, all such places shall be removed and replaced with new material and then rolled until the edges at which the new work connects with the old becomes invisible. All such removal and replacement of unsatisfactory surfacing shall be done by the Contractor without additional compensation.
- z) The edges of the permanently resurfaced trenches (where the new bituminous concrete meets the existing pavement) shall be sealed with bitumen and lightly backsanded, as directed by the Engineer. Bitumen used for sealing shall be RS-1 emulsion or other approved bitumen.

**Method of Measurement**

**aa)** Measurements taken for payment under **Item 29** shall be taken **by the square yard** of bituminous concrete in place, and **only to those limits as pre-approved by the Engineer**. Areas disturbed by the Contractor beyond these limits shall be paved, but shall not be measured for payment.

**bb)** Measurements taken for payment under **Item 30** shall be taken **by the square yard** of bituminous concrete in place, and **only to those limits as pre-approved by the Engineer**. Areas disturbed by the Contractor beyond these limits shall be paved, but shall not be measured for payment.

**cc) Basis of Payment**

**dd)** Under **Item 29** the Contractor will be paid the contract unit price **per square yard** for bituminous concrete Type I-1 for permanent trench resurfacing, complete in place, which unit price shall include full compensation **for all excavation of undesirable material, and the disposal thereof**, in addition to all labor and materials, and for all tools and equipment and all incidentals necessary to complete the work under this item in accordance with the plans, as directed by the Engineer and as specified herein. **(The Contractor is reminded that the per square yard price is for the total yield which is to be applied in two courses).**

**ee)** Under **Item 30** the Contractor will be paid the contract unit price **per square yard** for bituminous concrete Type I-1 for permanent trench resurfacing, complete in place, which unit price shall include full compensation **for all excavation of undesirable material, and the disposal thereof**, in addition to all labor and materials, and for all tools and equipment and all incidentals necessary to complete the work under this item in accordance with the plans, as directed by the Engineer and as specified herein. **(The Contractor is reminded that the per square yard price is for the total yield which is to be applied in two courses).**



**ITEM 31 – REMOVE, STOCKPILE AND RESET EXISTING CURB****Description**

a) All existing curb that does not meet the proposed line or grade, or other curb which must be disturbed throughout the course of these operations, and/or any other curb designated by the Engineer, shall be reset to the existing line and grade, or other grade as specified by the Engineer.

**Method of Construction**

b) The curb to be reset shall be excavated down to the underside of the existing curb or lower if necessary. The existing curb shall then be set to true line and grade. Gravel shall be forced under the curb with appropriate tools so as to form an unyielding base.

c) If the Engineer so directs, the Contractor shall remove the existing curb from its existing location, prepare an adequate gravel base and reset the curb as described above.

d) Any area that is inaccessible to mobile mechanical equipment or in restricted areas shall be compacted with pneumatic rammers or powered hand tampers. Compaction shall be carried on until the density of the material is not less than ninety-five (95) percent of the Standard Proctor Density, as determined by Standard laboratory Compaction Test.

**Method of Measurement**

e) Measurements taken for payment shall be taken by the **linear foot** of the reset curb, inclusive of straight and curved curb, guttermouths, and/or corner blocks, complete in place.

**Basis of Payment**

f) Under **Item 31** the Contractor will be paid the contract unit price **per linear foot** of reset curb, complete in place, which unit price shall include full compensation for all labor, materials, tools and equipment, and all incidentals necessary to complete the work under this item, as shown on the plans, as directed by the Engineer and as specified herein.

**ITEM 32 – 3” BITUMINOUS CONCRETE WALKS & DRIVE APRONS (PUBLIC LANDS)****Description**

- a) Under **Item 32** where existing bituminous walks and/or driveways on public lands do not meet the proposed line and grade and/or are otherwise deemed to be deficient by the Engineer, then they shall be rebuilt so that they meet the requirements of the Engineer and/or as specified on the plan.
- b) **Excavation shall be done and paid for under this item.**
- c) Bituminous concrete walks, driveways and/or driveway aprons shall consist of a six (6) inch gravel base course and a two (2) inch course of dense graded crushed stone. **Two (2) inch bituminous concrete Type I-1 shall be placed in two consecutive layers of one (1) inch binder and one (1) inch of wearing course top. Three (3) inch bituminous concrete Type I-1 shall be placed in two consecutive layers of one and three-quarter (1 3/4) inch binder and one and one-quarter (1 1/4) inch of wearing course top.** Dimensions shall mean the finished compacted depth.
- d) Gravel furnished and installed while completing work under this item shall be included in the Item bid price. No additional compensation shall be paid to the contractor for gravel used while completing work under this Item.

**Materials**

- e) All gravel shall be run of the bank gravel containing no stone larger than three (3) inches in diameter and shall be free from roots, or other foreign matter, but having a binding quality that will compact to a ninety-five (95) per cent compaction requirement. Dense graded crushed stone shall conform to Division III, Materials, subsection M2.01.7 of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highway and Bridges, dated 1988. All gravel and dense graded crushed stone shall be subject to the approval of the Engineer. All subsequent references to gravel in this section shall also apply to dense graded crushed stone.
- f) This type of pavement shall be composed of mineral aggregate, mineral filler and bituminous material, plant mixed and laid hot. The mixing and materials shall conform to the current specifications as set forth in the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highway and Bridges, Sections 460 and M3, dated 1988 Bituminous concrete Type I-1.

**Method of Construction**

- g) The existing bituminous concrete walks and/or driveways shall be neatly and cleanly cut by a means, and along a true line, as approved by the Engineer, and said walks and/or driveways shall then be carefully excavated and subsequently filled to a subgrade ten (10) inches below and parallel to the finished grade. The gravel and dense graded crushed stone base course shall then be constructed and rolled with rollers weighing not less than three (3) tons until the surface presents a firm unyielding surface satisfactory to the Engineer.
- h) Any area that is inaccessible to mobile mechanical equipment or in restricted areas shall be compacted with pneumatic rammers or powered hand tampers.
- i) Compaction shall be carried on until the density of the material is not less than ninety-five (95) per cent of the Standard Proctor Density as determined by Standard Laboratory Compaction Test. The Contractor shall arrange and pay for and submit to the Engineer results of such tests taken in such number as to indicate a test of every eight hundred (800) square feet of compacted area.

Method of Construction (Continued)

- j) The constructed base shall then be topped with a two (2) inch bituminous concrete Type I-1 wearing surface.
- k) The bituminous concrete must be kept clean during hauling and handling and covered during transit with canvas or other material which will retain the desired pavement temperature. These mixtures must not be hauled in such a manner that segregation of the ingredients takes place, or that a crust is formed on the surface, or that the mixture will crumble or flatten out when dumped. Trucks which transport the mixture shall be tight, and the side of the bodies shall be coated with a thin film of soap solution. The dispatching of trucks from the distribution point shall be so arranged that all the material which is to be delivered at or on the road surface during any day may be placed and shall have received final compression in a continuous manner in order to minimize cold seaming.
- l) The bituminous concrete mixture shall be delivered to the work in such condition that it is easily workable and can be efficiently laid. The mixture shall be laid only on an approved base course which is dry and only when weather conditions are suitable which shall be decided by the Engineer.
- m) All bituminous concrete applied to the roadway shall only be applied in bright sunlight or partly cloudy weather without the threat of rain. The Contractor is not to schedule bituminous roadway application unless such favorable weather conditions are professionally forecast by a recognized weather agency, and at the request of the Engineer, this forecast shall be filed with Engineer in hard-copy form. Further, no bituminous concrete shall be applied upon a residually wet surface, and no bituminous concrete which has been prematurely cooled by rain, either on the roadway or on the truck, will be accepted.
- n) The temperature of the mixture to be laid shall be between two hundred and twenty-five (225) degrees Fahrenheit and three hundred and twenty-five (325) degrees Fahrenheit and no mixture shall be placed when the air temperature in the shade and away from artificial heat is forty (40) degrees Fahrenheit or less. Variation from these temperatures may be permitted only on written permission of the Engineer.
- o) The separate courses shall be rolled with a self-propelled equally balanced tandem roller weighing not less than three (3) tons and not more than five (5) tons. In places inaccessible to a power roller, compaction shall be obtained by means of hand tampers.
- p) The roller shall pass over the unprotected end of the freshly laid mixture only when the laying of the mixture is to be discontinued at the end of the days operation. In such cases, provisions shall be made for proper bonding with new surface mixture by cutting back over the full width and depth of the course. When laying of the course is resumed, the exposed edge of the joint shall be painted with a thin uniform coat of hot asphalt, just before the new mixture is laid.
- q) The finished surface shall present an even and true contour. When tested with a ten (10) foot straight edge place parallel to the center line of the surface course there shall be no deviation from a true surface in excess of one quarter (1/4) of one (1) inch. The sides when the forms are removed shall present a true line conforming to the line desired.

*Method of Construction (Continued)*

r) Landings and roundings at the street corners shall be constructed as specified in the construction details and/or as directed by the Engineer.

*Method of Measurement*

s) Bituminous concrete walks and/or driveways shall be measured for payment by the **square yard**, complete in place.

*Basis of Payment*

t) Under **Item 32** the Contractor will be paid the contract unit price **per square yard** for constructing bituminous concrete walks and/or driveways, complete in place, **including excavation, disposal of excess material(s), and for the gravel and dense graded crushed stone base**. The unit price shall include full compensation for all labor, materials, tools and equipment and all incidental work necessary to complete the work under this item in accordance with the plans, as directed by the Engineer and as specified herein.

**ITEM 33 – 4” CEMENT CONCRETE WALKS WITH LAMPBLACK****ITEM 34 – 6” CEMENT CONCRETE DRIVE APRONS WITH LAMPBLACK****Description**

a) All cement concrete walks and/or driveways, in whole or in part, that are necessarily disturbed under this contract, or any additional adjacent walkway and/or driveway apron areas which are deemed to be deficient by the Engineer, shall be neatly sawcut along the nearest joint as determined by the Engineer, and shall be subsequently rebuilt so that they meet the proposed line and grade of the adjacent existing walks in a manner satisfactory to the Engineer. The Contractor shall construct cement concrete walks where shown on the plans and where directed by the Engineer.

**b) Excavation shall be done and paid for under these items.**

c) The base for the cement concrete walks and/or driveway aprons shall consist of a six (6) inch gravel base course and a two (2) inch course of dense graded crushed stone. Dimensions shall mean the finished compacted depth. The width of the walk shall typically be five (5) feet unless other widths are called for on the plans or by the Engineer. The width of the driveway apron shall typically be eight (8) feet unless other widths are called for on the plans or by the Engineer.

d) Gravel furnished and installed while completing work under this item shall be included in the Item bid price. No additional compensation shall be paid to the contractor for gravel used while completing work under this Item.

**Materials**

e) Cement concrete shall be of an air entrained type conforming to the current specifications of Section M4 of the Massachusetts Standard Specifications for Highways and Bridges supplement of June 19, 1985. Cement concrete shall have a 28 day compressive strength of 4000 PSI using 3/4 inch aggregate, and with an entrained air content of  $7.0 \pm 1.0\%$ .

**f) ADD MIXTURES: Ordinary or emulsified carbon black - 4 pounds per cubic yard, unless otherwise directed by the Engineer.**

g) Upon delivery of each and every concrete mix, the Engineer shall be furnished with a slip clearly stating the design mix and the quantities of the above mentioned add mixture, and any other add mixtures present in the mix. Any concrete mix, which when tested on the job site is found to contain quantities of entrained air less than six (6) or more than eight (8) per cent or which yields a slump of less than three (3) inches or greater than five (5) inches shall be rejected, the decision of the Engineer shall be final. The Engineer reserves the right to change the above mix in order to meet the required strength test.

h) All concrete shall be transit mix and shall conform to the current specifications of A.S.T.M. C-94. Hand mix concrete or machine mixed on the job concrete shall be used only when permitted by the City Engineer in writing.

i) Premoulded asphalt expansion joints shall conform to the requirements of AASHTO Designation M33.

**Method of Construction**

- j) The walks and or driveway aprons shall be neatly sawcut along the nearest practical score line and/or to any other limit as directed by the Engineer. Walks and aprons shall then be excavated and subsequently filled to a subgrade twelve (12) inches below and parallel to the finished grade, as shown on the plans, or as directed by the Engineer, or as specified herein.
- k) Upon the prepared subbase, the gravel and dense graded crushed stone base course shall be constructed and rolled with rollers weighing not less than three (3) tons and not more than five (5) tons until the surface presents a firm unyielding surface satisfactory to the Engineer.
- l) Any area that is inaccessible to mobile mechanical equipment or in restricted areas shall be compacted with pneumatic rammers or powered hand tampers.
- m) Compaction of the sub-base material(s) shall be carried on until the density of the material is not less than ninety-five (95) per cent of the Standard Proctor Density as determined by Standard Laboratory Compaction Test. If the Engineer deems it necessary the Contractor shall arrange and pay for and submit to the Engineer results of such tests taken in such number as to indicate a test of every eight hundred (800) square feet of compacted area, however the Contractor will always be solely responsible for the structural integrity of the sub-base materials and for full compliance with the stipulated compaction requirement(s).
- n) All concrete walks and drive aprons shall be constructed with the use of side forms. The forms shall be clean, smooth and free from warp. Forms for straight concrete walks shall be two by fours (2"X 4"s) and for driveway aprons forms shall be two by sixes (2"X6"s) staked at intervals no greater than four (4) feet, forms for curved sections of concrete walks shall be four (4) inch strapping staked as directed by the Engineer, but in no case at intervals greater than four (4) feet. The forms shall be thoroughly braced and set to the proposed line and grade.
- o) Sidewalks and drive aprons shall be constructed in one (1) course having a total finished depth of four (4) inches. Top or wearing courses shall not be permitted.
- p) The end of every pour shall end at joints. Fresh concrete will not be allowed to be placed against previously laid concrete which has attained its initial set, excepting at full vertical joints.
- q) The walks shall be blocked out in rectangular sections measuring not more than six (6) feet in any dimension and no transverse joint for drive aprons shall be spaced more than six (6) feet apart. Transverse joints for a distance of twenty (20) feet, more or less, shall be dummy joints with an approved edging tool which shall score the joints a minimum of one (1) inch in depth. The concrete walks shall be placed in alternate slabs twenty (20) feet, more or less, in length. The slabs for walks shall be separated by transverse premoulded asphalt expansion joints one-half (1/2) inch in thickness and a depth of not less than the full thickness of the walk set at right angles to the walk and to the side forms, in addition a transverse premoulded asphalt expansion joint shall be placed where the four inch walk . No finishing operation shall be performed while free water is present. Finishing operations shall be delayed until all bleed water and water sheen has left the surface and the concrete has started to stiffen. After water sheen has disappeared, edging operations where required shall be completed. After edging and jointing operations, the surface shall be floated with either aluminum or magnesium floats. Immediately following floating, the surface shall be steel-troweled. If necessary, tooled joints and edges shall be rerun before and after troweling to maintain uniformity. After troweling, the surface shall be brushed by drawing a soft-bristled pushbroom with a long handle over the surface of the concrete to produce a nonslip surface. In conveying the concrete from the place of mixing to the place of deposit, the operation shall be conducted in such a manner that no mortar will be lost, and the concrete shall be so handled that the concrete will be of uniform composition throughout, showing neither excess nor lack of mortar in any one place.

*Method of Construction (Continued)*

- r) Premoulded asphalt expansion joints shall be placed adjacent to or around existing curb, walks, buildings and other structures designated by the Engineer.
- s) No concrete shall be placed on a frozen subbase nor shall concrete be poured when the air temperature is thirty-three (33) degrees Fahrenheit and falling, unless permitted by the Engineer, in which case the adequate means for the protection of the concrete must be provided for. No salt or other unauthorized admixtures shall be used. When completed, the newly laid concrete shall be protected from all traffic and the weather for a period of three (3) days. The Concrete shall be cured by spraying with an approved curing compound of a recognized brand applied in accordance with the manufacturer's instructions.
- t) This item shall also apply to cement concrete walks and/or concrete driveways on private lands that have to be rebuilt to meet the proposed line and grade.
- u) All water service boxes, and/or any other service box, and/or any handhole, which falls within the walk and/or driveway apron area is to be raised such that the top plane of the utility cover shall be set flush with the finished sidewalk surface, and such work shall be carried out to the satisfaction of the Engineer.
- v) In those cases where 'frozen' water service boxes are encountered the Contractor is to bring these special cases immediately to the attention of the Engineer, and upon his order to do so, the Contractor shall either remedy the situation by a means which is acceptable to the Engineer or shall otherwise retrieve corrective materials from the City of Newton Utility, and subsequently install them to the satisfaction of the Engineer.

*Method of Measurement*

- w) Cement concrete walks, or portions thereof, shall be measured for payment by the square yard, complete in place.
- x) Cement concrete drive aprons, or portions thereof, shall be measured for payment by the square yard, complete in place

*Basis of Payment*

- y) Under **Item 33** the Contractor will be paid the contract unit price **per square yard** for the cement concrete walks, complete in place, **including the gravel and dense graded crushed stone** base and premoulded asphalt expansion joints, and for the **excavation and the disposal of all undesirable material(s)**. The unit price shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under this item as shown on the plans, as directed by the Engineer and as specified herein, inclusive of the raising of all service boxes to the finished grade.
- z) Under **Item 34** the Contractor will be paid the contract unit price **per square yard** for the cement concrete drive aprons, complete in place, **including the gravel and dense graded crushed stone** base and premoulded asphalt expansion joints, and **for the excavation and the disposal of all undesirable material(s)**. The unit price shall include full compensation for all labor, materials, tools and equipment and all incidentals necessary to complete the work under this item as shown on the plans, as directed by the Engineer and as specified herein, inclusive of the raising of all service boxes to the finished grade.



**ITEM 35 – REGRADE, LOAM & SEED (LOAM BORDERS & PRIVATE YARDS)****Description**

a) Loam borders and lawns disturbed by the contractor while completing work under this contract, shall be rebuilt, as designated by the Engineer. The depth of the loam shall be six (6) inches measured in its finished state. The finished grade of the loam border shall be such that the edges of the loam and the sidewalk shall meet flush, and at the same grade. The same shall apply on the inside edge of the curb.

**Materials**

- b) Loam shall be clear, rich, dark colored loam friable, reasonably well supplied with plant food, free from excess swamp muck, peat, clay, silt, stones, sods, roots, gravel, sand, subsoil or other foreign material.
- c) Limestone shall be ground limestone that will pass a No. 20 Sieve, and at least seventy-five (75) per cent will pass a No. 100 Sieve. Ground limestone shall have a neutralizing value satisfactory to the Engineer.
- d) Fertilizer shall be furnished in containers plainly marked with the chemical analysis of the product, and it shall have one of the following compositions by weight.

	10-6-4	8-6-4	7-7-7
Nitrogen	10% min.	8% min.	7% min.
Available Potash Acid ( $P_2O_5$ )	6%	6%	7% min.
Water Soluble Potash ( $K_2O$ )	4% min.	4% min.	7% min.

- e) At least fifty (50) per cent by weight of the nitrogen content of the fertilizer shall be derived from organic materials.
- f) Grass seed shall be of the previous year's crop, and in no case shall the weed seed content exceed one (1) per cent by weight. Grass seed shall conform to the requirements of the following table:

	Proportion	Germination Minimum	Purity Minimum
Creeping Red Fescue	50%	85%	95%
Kentucky Blue	25%	85%	90%
Domestic Rye	10%	90%	98%
Red Top	10%	85%	92%
Ladino Clover	5%	85%	96%

**Materials (Continued)**

- g) The several varieties of seed shall be furnished and delivered separately and mixed after delivery, as directed by the Engineer.
- h) The responsibility for satisfactory results shall rest entirely with the Contractor regardless of any tentative approval given by the Engineer

**Method of Construction**

- i) The loam areas shall be excavated to subgrade six (6) inches below and parallel to the finished grade. Loam shall then be spread on the subgrade in sufficient quantities to produce, without rolling and after material settlement has taken place, a depth of four (4) inches. On this layer of loam, ground limestone shall be spread at the rate of one-half (1/2) pound per square yard, and thoroughly incorporated into the loam for a total depth, by harrowing or spading and raking. The surface shall be brought smoothly to a grade parallel to the finished grade.
- j) The second layer of loam shall then be spread in sufficient quantities to produce, after final rolling, the required finished depth. At least five (5) days shall elapse after the application of the ground limestone, and then fertilizer shall be spread on the top layer of loam at the rate of two tenths (2/10) of a pound per square yard. The full depth of the loam shall then be spaded, harrowed and graded to the finished grade.
- k) After the grass plots have been prepared as described above, grass seed shall be carefully and appropriately sown at the rate of three and six tenths (3-6/10) pounds to each one hundred (100) square yards. The surface shall then be raked until the grass seed is thoroughly covered with a thin layer of loam. Finally the surface shall be rolled with a hand roller weighing not more than one hundred (100) pounds per foot of width.
- l) The Contractor shall insure a good catch of grass and shall be responsible for the first cutting of the grass. He shall maintain seeded areas during construction, and he shall reloom, regrade and reseed any area that, in the opinion of the Engineer, requires such.

**Method of Measurement**

- m) Measurements taken for payment shall be by the **square yard** of the finished work, complete in place.

**Basis of Payment**

- n) Under **Item 35** the Contractor will be paid the contract unit price **per square yard** for all loam areas, complete in place, which unit price shall include full compensation for all labor, materials, tools and equipment, and all incidentals necessary to complete the work under this item in accordance with the plans, as directed by the Engineer, and as specified herein.

**ITEM 36 – MATERIALS TESTING****Description**

- a) The Contractor shall include in his bid an allowance of **five hundred dollars (\$500.00)** for cylinders and for other tests conducted in the field and/or at the laboratory as required by the Engineer for the control of the concrete, reclaimed pavement material, bituminous concrete pavement, or for any other material.
- b) The City will reimburse the Contractor the full amount of the material testing services provided such tests have been pre-approved and/or ordered by the Engineer. The Contractor is required to submit to the City Engineer copies of evidence of payment.

**Basis of Payment**

- c) Under **Item 36** the Contractor will be paid the **full invoice amount** for approved and/or for authorized material testing services conducted by an independent and qualified laboratory. Under no circumstances will the City of Newton pay for any testing procedures which excessively exceed the accepted industry standards.

**ITEM 37 – MISCELLANEOUS WORK ALLOWANCE (ENGINEERS DISCRETIONARY FUND)****Description**

a) The intent of this section is not for work or materials typically incidental to other work items performed and/or rendered under this contract, or is for work and/or materials which are otherwise called for under these specifications, and/or for work which is indicated on the plans, but for work and materials which are unique in nature and rendered as a direct request of the Engineer. These items of work shall be completed only when and as directed by the Engineer. The Contractor may not proceed with any work under this section without the written notice of the Engineer to complete the work under the “Miscellaneous Work Allowance”.

b) The sum to be allowed for the work of this **Item 36 shall be Five Thousand Dollars (\$5,000.00)**.

c) All work under this item shall be paid for by one or more or a combination of the following methods at the City’s discretion:

- a. Unit prices previously bid
- b. An agreed lump sum
- c. The actual cost of:
  1. labor, including foreman;
  2. materials entering permanently into the work;
  3. the ownership or rental cost of construction plant and equipment during the time of use on the extra work;
  4. power and consumable supplies for the operation of power equipment;
  5. insurance;
  6. social security and old age, and unemployment benefits.

d) To the cost under c. there shall be added a fixed fee to be agreed upon, but **not to exceed fifteen per cent (15%) of the actual cost of the work**. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expense.

e) The City shall retain a cash credit in full or in part, in the event that the final cost of materials and/or equipment is lower than the original cash allowance provided.

f) To the estimated cost or actual cost under (c) for work performed by subcontractors, there shall be added a fixed fee of ten per cent (10%) as compensation to cover the subcontractor’s cost of supervision, overhead, profit and any other subcontract general expense, plus ten per cent (10%) as compensation to cover the General Contractor’s cost of supervision, overhead, profit, bond, and any other general expenses.

**Basis of Payment**

g) Payment for work completed under **Item 37** shall be as specified above, in full or in part, as pre-approved by the Engineer.

**ITEM 38 – ALLOWANCE FOR PAYMENT OF POLICE OFFICERS****Description**

- a) The Contractor shall include in his bid an allowance of **Ten Thousand Dollars (\$10,000.00)** for payment of Police traffic officers. This allowance will be used as a basis for comparison of bids only.
- b) The City will reimburse the Contractor for the full amount of charges for Police services.
- c) **All applicable sections of Item 1** of the Special Conditions of this Contract shall apply.
- d) Under this item the Contractor shall be responsible for ordering and canceling all details on a day to day basis. **In the event the Contractor has ordered police details and does not give the police department ample advance notice that work has been cancelled for that day due to inclement weather or for any other reason, then the Contractor shall bear the expense of that billed detail.**
- e) The Contractor shall completely familiarize himself with the current policies regarding and regulating police details. In the event police details cannot be completely filled to cover the Contractor's scheduled work for that day then the Contractor shall adjust his work schedule accordingly and shall **not hold the City responsible for any loss of time**, or for any other financial loss. The City of Newton will however grant an extension of time to the original contract term for each day lost due to insufficient police staffing.

**Basis of Payment**

- f) Under **Item 38** the Contractor shall **submit paid invoices** to the Engineer after which the Contractor will be reimbursed for the full invoice amount for the City of Newton Police Department and/or, when applicable, the Massachusetts State Police charges, as full reimbursement under the allowance for payment of Police officers. The original invoice issued by the billing authority must be submitted to the Engineer for payment under this item.

***DRAWINGS MUST BE PICKED UP AT THE PURCHASING DEPARTMENT. HOWEVER, THE CONTRACTOR IS ADVISED TO CALL AHEAD TO ENSURE THAT A COMPLETE SET OF DRAWINGS IS READILY AVAILABLE. (617-796-1220)***

**END OF SPECIAL PROVISIONS**

**DRAWINGS MUST BE PICKED UP AT  
THE PURCHASING DEPT.**

## **APPENDIX - A**

### **Trench Permit**





# City of Newton

Massachusetts 02459

Engineering Division

Phone (617) 796-1020

FAX (617) 796-1051

Permit Number \_\_\_\_\_

Date Issued \_\_\_\_\_

Expiration Date \_\_\_\_\_

Fee: \$50 x \_\_\_\_\_ = \_\_\_\_\_  
Trenches Total

## TRENCH PERMIT

Pursuant to G.L. c. 82A §1 and 520 CMR 7.00 et seq.(as amended)

THIS PERMIT MUST BE FULLY COMPLETED PRIOR TO CONSIDERATION

Name of Applicant			Phone		Cell	
Street Address						
City/Town	MA	ZIP				
Name of Excavator (if different from applicant)			Phone		Cell	
Street Address						
City/Town	MA	ZIP				
Name of Owner(s) of Property			Phone		Cell	
Street Address						
City/Town	MA	ZIP				
Other Contact			Permit Fee Received No ( ) Yes ( )			
Description, location and purpose of proposed trench: Please describe the exact location of the proposed trench and its purpose (include a description of what is (or is intended) to be laid in proposed trench (eg; pipes/cable lines etc..). Please use reverse side if additional space is needed.						
Insurance Certificate #:						
Name and Contact Information of Insurer:						
Policy Expiration Date:						
Dig Safe #:						
Name of Competent Person (as defined by 520 CMR 7.02):						
Massachusetts Hoisting License #						
License Grade:			Expiration Date:			

BY SIGNING THIS FORM, THE APPLICANT, OWNER, AND EXCAVATOR ALL ACKNOWLEDGE AND CERTIFY THAT THEY ARE FAMILIAR WITH, OR, BEFORE COMMENCEMENT OF THE WORK, WILL BECOME FAMILIAR WITH, ALL LAWS AND REGULATIONS APPLICABLE TO WORK PROPOSED, INCLUDING OSHA REGULATIONS, G.L. c. 82A, 520 CMR 7.00 et seq., AND ANY APPLICABLE MUNICIPAL ORDINANCES, BY-LAWS AND REGULATIONS AND THEY COVENANT AND AGREE THAT ALL WORK DONE UNDER THE PERMIT ISSUED FOR SUCH WORK WILL COMPLY THEREWITH IN ALL RESPECTS AND WITH THE CONDITIONS SET FORTH BELOW.

THE UNDERSIGNED OWNER AUTHORIZES THE APPLICANT TO APPLY FOR THE PERMIT AND THE EXCAVATOR TO UNDERTAKE SUCH WORK ON THE PROPERTY OF THE OWNER, AND ALSO, FOR THE DURATION OF CONSTRUCTION, AUTHORIZES PERSONS DULY APPOINTED BY THE MUNICIPALITY TO ENTER UPON THE PROPERTY TO MONITOR AND INSPECT THE WORK FOR CONFORMITY WITH THE CONDITIONS ATTACHED HERETO AND THE LAWS AND REGULATIONS GOVERING SUCH WORK.

THE UNDERSIGNED APPLICANT, OWNER AND EXCAVATOR AGREE JOINTLY AND SEVERALLY TO REIMBURSE THE MUNICIPALITY FOR ANY AND ALL COSTS AND EXPENSES INCURRED BY THE MUNICIPALITY IN CONNECTION WITH THIS PERMIT AND THE WORK CONDUCTED THEREUNDER, INCLUDING BUT NOT LIMITED TO ENFORCING THE REQUIREMENTS OF STATE LAW AND CONDITIONS OF THIS PERMIT, INSPECTIONS MADE TO ASSURE COMPLIANCE THEREWITH, AND MEASURES TAKEN BY THE MUNICIPALITY TO PROTECT THE PUBLIC WHERE THE APPLICANT OWNER OR EXCAVATOR HAS FAILED TO COMPLY THEREWITH INCLUDING POLICE DETAILS AND OTHER REMEDIAL MEASURES DEEMED NECESSARY BY THE MUNICIPALITY.

THE UNDERSIGNED APPLICANT, OWNER AND EXCAVATOR AGREE JOINTLY AND SEVERALLY TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE MUNICIPALITY AND ALL OF ITS AGENTS AND EMPLOYEES FROM ANY AND ALL LIABILITY, CAUSES OR ACTION, COSTS, AND EXPENSES RESULTING FROM OR ARISING OUT OF ANY INJURY, DEATH, LOSS, OR DAMAGE TO ANY PERSON OR PROPERTY DURING THE WORK CONDUCTED UNDER THIS PERMIT.

APPLICANT SIGNATURE

\_\_\_\_\_ DATE \_\_\_\_\_

EXCAVATOR SIGNATURE (IF DIFFERENT)

\_\_\_\_\_ DATE \_\_\_\_\_

OWNER'S SIGNATURE (IF DIFFERENT)

\_\_\_\_\_ DATE: \_\_\_\_\_

For City/Town use -- Do not write in this section	
PERMIT APPROVED BY	\$ _____ Application Fee
PERMITTING AUTHORITY	
CONDITIONS OF APPROVAL	

## CONDITIONS AND REQUIREMENTS PURSUANT TO G.L.C.82A AND 520 CMR 7.00 et seq. (as amended)

By signing the application, the applicant understands and agrees to comply with the following:

- i. No trench may be excavated unless the requirements of sections 40 through 40D of chapter 82, and any accompanying regulations, have been met and this permit is invalid unless and until said requirements have been complied with by the excavator applying for the permit including, but not limited to, the establishment of a valid excavation number with the underground plant damage prevention system as said system is defined in section 76D of chapter 164 (DIG SAFE);
- ii. Trenches may pose a significant health and safety hazard. Pursuant to Section 1 of Chapter 82 of the General Laws, an excavator shall not leave any open trench unattended without first making every reasonable effort to eliminate any recognized safety hazard that may exist as a result of leaving said open trench unattended. Excavators should consult regulations promulgated by the Department of Public Safety in order to familiarize themselves with the recognized safety hazards associated with excavations and open trenches and the procedures required or recommended by said department in order to make every reasonable effort to eliminate said safety hazards which may include covering, barricading or otherwise protecting open trenches from accidental entry.
- iii. Persons engaging in any in any trenching operation shall familiarize themselves with the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et.seq., entitled Subpart P “Excavations”.
- iv. Excavators engaging in any trenching operation who utilize hoisting or other mechanical equipment subject to chapter 146 shall only employ individuals licensed to operate said equipment by the Department of Public Safety pursuant to said chapter and this permit must be presented to said licensed operator before any excavation is commenced;
- v. By applying for, accepting and signing this permit, the applicant hereby attests to the following: (1) that they have read and understands the regulations promulgated by the Department of Public Safety with regard to construction related excavations and trench safety; (2) that he has read and understands the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CMR 1926.650 et.seq., entitled Subpart P “Excavations” as well as any other excavation requirements established by this municipality; and (3) that he is aware of and has, with regard to the proposed trench excavation on private property or proposed excavation of a city or town public way that forms the basis of the permit application, complied with the requirements of sections 40-40D of chapter 82A.
- vi. This permit shall be posted in plain view on the site of the trench.

### Summary of Excavation and Trench Safety Regulation (520 CMR 14.00 et seq.)

This summary was prepared by the Massachusetts Department of Public Safety pursuant to G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and G.L.c.82A, go to [www.mass.gov/dps](http://www.mass.gov/dps)

Pursuant to M.G.L. c. 82, § 1, the Department of Public Safety, jointly with the Division of Occupational Safety, drafted regulations relative to trench safety. The regulation is codified in section 14.00 of title 520 of the Code of Massachusetts Regulations. The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a construction-related purpose on public or private land or rights-of-way. All municipalities must establish a local permitting authority for the purpose of issuing permits for trenches within their municipality. Trenches on land owned or controlled by a public (state) agency requires a permit to be issued by that public agency unless otherwise designated.

In addition to the permitting requirements mandated by statute, the trench safety regulations require that all excavators, whether public or private, take specific precautions to protect the general public and prevent unauthorized access to unattended trenches. Accordingly, unattended trenches must be covered, barricaded or backfilled. Covers must be road plates at least ¾” thick or equivalent; barricades must be fences at least 6’ high with no openings greater than 4” between vertical supports; backfilling must be sufficient to eliminate the trench. Alternatively, excavators may choose to attend trenches at all times, for instance by hiring a police detail, security guard or other attendant who will be present during times when the trench will be unattended by the excavator.

The regulations further provide that local permitting authorities, the Department of Public Safety, or the Division of Occupational Safety may order an immediate shutdown of a trench in the event of a death or serious injury; the failure to obtain a permit; or the failure to implement or effectively use adequate protections for the general public. The trench shall remain shutdown until re-inspected and authorized to re-open provided, however, that excavators shall have the right to appeal an immediate shutdown. Permitting authorities are further authorized to suspend or revoke a permit following a hearing. Excavators may also be subject to administrative fines issued by the Department of Public Safety for identified violations.

For additional information please visit the Department of Public Safety’s website at [www.mass.gov/dps](http://www.mass.gov/dps)

### Summary of 1926 CFR Subpart P -OSHA Excavation Standard

This is a worker protection standard, and is designed to protect employees who are working inside a trench. This summary was prepared by the Massachusetts Division of Occupational Safety and not OSHA for informational purposes only and does not constitute an official interpretation by OSHA of their regulations, and may not include all aspects of the standard.

For further information or a full copy of the standard go to [www.osha.gov](http://www.osha.gov).

- **Trench Definition per the OSHA standard:**
  - An excavation made below the surface of the ground, narrow in relation to its length.
  - In general, the depth is greater than the width, but the width of the trench is not greater than fifteen feet.
- **Protective Systems** to prevent soil wall collapse are always required in trenches deeper than 5', and are also required in trenches less than 5' deep when the competent person determines that a hazard exists. Protection options include:
  - Shoring. Shoring must be used in accordance with the OSHA Excavation standard appendices, the equipment manufacturer's tabulated data, or designed by a registered professional engineer.
  - Shielding (Trench Boxes). Trench boxes must be used in accordance with the equipment manufacturer's tabulated data, or a registered professional engineer.
  - Sloping or Benching. In Type C soils (what is most typically encountered) the excavation must extend horizontally 1 ½ feet for every foot of trench depth on both sides, 1 foot for Type B soils, and ¾ foot for Type A soils.
  - A registered professional engineer must design protective systems for all excavations greater than 20' in depth.
- **Ladders** must be used in trenches deeper than 4'.
  - Ladders must be inside the trench with workers at all times, and located within 25' of unobstructed lateral travel for every worker in the trench.
  - Ladders must extend 3' above the top of the trench so workers can safely get onto and off of the ladder.
- **Inspections** of every trench worksite are required:
  - Prior to the start of each shift, and again when there is a change in conditions such as a rainstorm.
  - Inspections must be conducted by the competent person (see below).
- **Competent Person(s) is:**
  - Capable (i.e., trained and knowledgeable) in identifying existing and predictable hazards in the trench, and other working conditions which may pose a hazard to workers, and
  - Authorized by management to take necessary corrective action to eliminate the hazards. Employees must be removed from hazardous areas until the hazard has been corrected.
- **Underground Utilities** must be:
  - Identified prior to opening the excavation (e.g., contact Digsafe).
  - Located by safe and acceptable means while excavating.
  - Protected, supported, or removed once exposed.
- **Spoils** must be kept back a minimum of 2' from the edge of the trench.
- **Surface Encumbrances** creating a hazard must be removed or supported to safeguard employees. Keep heavy equipment and heavy material as far back from the edge of the trench as possible.
- **Stability of Adjacent Structures:**
  - Where the stability of adjacent structures is endangered by creation of the trench, they must be underpinned, braced, or otherwise supported.
  - Sidewalks, pavements, etc. shall not be undermined unless a support system or other method of protection is provided.
- **Protection from water accumulation hazards:**
  - It is not allowable for employees to work in trenches with accumulated water. If water control such as pumping is used to prevent water accumulation, this must be monitored by the competent person.
  - If the trench interrupts natural drainage of surface water, ditches, dikes or other means must be used to prevent this water from entering the excavation.
- **Additional Requirements:**
  - For mobile equipment operated near the edge of the trench, a warning system such as barricades or stop logs must be used.
  - Employees are not permitted to work underneath loads. Operators may not remain in vehicles being loaded unless vehicles are equipped with adequate protection as per 1926.601(b)(6).
  - Employees must wear high-visibility clothing in traffic work zones.
  - Air monitoring must be conducted in trenches deeper than 4' if the potential for a hazardous atmosphere exists. If a hazardous atmosphere is found to exist (e.g., O<sub>2</sub> <19.5% or >23.5%, 20% LEL, specific chemical hazard), adequate protections shall be taken such as ventilation of the space.
  - Walkways are required where employees must cross over the trench. Walkways with guardrails must be provided for crossing over trenches > 6' deep.
  - Employees must be protected from loose rock or soil through protections such as scaling or protective barricades.